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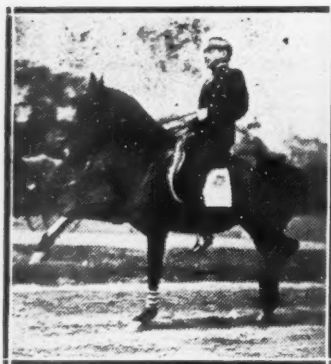
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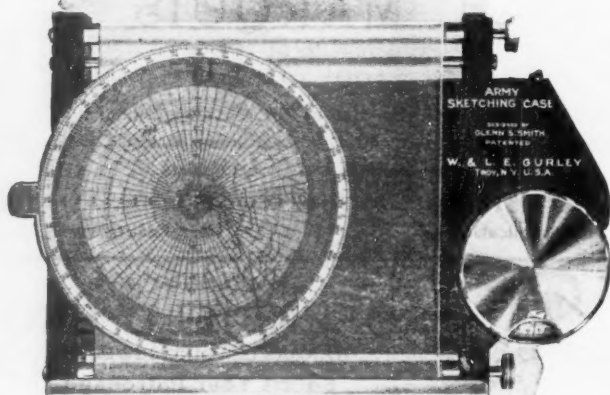
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United States Cavalry Association.

VOL. XXIV.

JULY, 1913.

No. 97

THE ORGANIZATION OF A CAVALRY REGIMENT.*

BY CAPTAIN M. C. SMITH, FOURTEENTH CAVALRY.

WHILE much has been written on this subject recently by officers of our own army, and much that has a direct bearing on it has been written by officers of foreign armies, it has seemed to the writer that the material available for a discussion of this important matter permits of an arrangement which will enable us to arrive at a correct conclusion with less difficulty and more certainty.

It will hardly be disputed that an organization will have merit in proportion as it is based on past experience, war experience of ourselves or other nations; and this leads us to history for the facts which are to serve as a guide.

We must study carefully the organization of the cavalry regiments of the several important powers, considering ourselves as one of these, at the different epochs, and consider seriously the reasons leading to the adoption or continuance of such organization.

We must not fail to consider how changed conditions of warfare have brought about in foreign countries changes in the

*Thesis prepared for Staff College course, 1912-13.

organization of all the arms except the cavalry; and we must inquire whether these changed conditions have affected the use and employment of cavalry; and, if we find that the cavalry, like the other arms, has been affected, we must seek out the causes which have led that arm in foreign countries to remain at a stand still while its sister arms have progressed. We must also, as throwing light on this last proposition, consider the origin and traditions of the arm.

In arriving at a conclusion as to the proper organization of a cavalry regiment we must keep constantly in mind two points, efficiency and economy. Any organization which cannot answer to these two requirements must be rejected even though it be that of the most important military nation of the world.

Taking the beginning of modern organization as a starting point and tracing the evolution of the organization of the cavalry regiment from that time to the present, we should have data which, in connection with the changed conditions of warfare, will serve to guide us in arriving at a conclusion as to the correct organization for the future.

Modern organization dates from the close of the feudal epoch in the fifteenth century, after which wars were waged less for national purposes than for the furtherance of dynastic or State interests, and were no longer carried on by the levy of the nation, but by mercenaries hired by the monarch or the State.

This process originated in Italy, where the rivalry of trading republics caused them to engage Swiss, English, and other mercenaries to fight their neighbors. With these men war was not an occasional occupation but a trade. Experience gained in a war was not, as had been the case formerly, lost by a return to peaceful pursuits, but was converted into improved formations and methods to be used in behalf of the next employer. Hence we find that military organization in its modern form originated in Italy, and that, in consequence, most military terms are derived from the Italian, as may be seen in such words as infantry, cavalry, colonel, squadron, battalion and regiment.

The word company in its military sense denoted originally the gathering of feudal retainers who followed their lord to the wars; it then came to mean the band who obeyed a captain

(*caput*—head), some noted leader among the mercenaries from whom regular armies sprang.

The company of Horse was soon differentiated from that of Foot, by being called a troop, a word of uncertain origin, by some connected with *turba* (a crowd), by others with the root of the Teutonic *treiben*, and akin to *drove*.

The strength of the company was at first indefinite, and amounted to some hundreds of men, but it was gradually made smaller, so as to be more flexible and mobile. The practice of the most successful leaders finally reduced it to a definite body of about one hundred men, which it was found was the largest number that could with certainty be reached by the voice, and commanded by one man in battle.

It had become usual by the 16th century to raise soldiers by larger bodies than the company or troop, and these were called regiments from being under the regiment or rule of one man, the colonel. This word comes from *colonello* (little column).

It became a practice for men of position to raise regiments. Such noblemen were often too busy, or too grand, to attend personally to their regiment and often became mere absentees. Their command was then exercised by their *locum tenens*, the lieutenant of the colonel (appointed by the colonel.) The staff and non-commissioned staff of the colonel very soon came to have practically the same composition it has to-day. And the officers and non-commissioned officers of the company are practically the same now as they were then.

The battalion from the 16th century onwards has always been the fighting unit of infantry. Battalion in Italian is *battaglione*, *battaglia* or battle array.

In the early 16th century when the company was only an administrative unit, the *battaglia* were its tactical subdivisions, and formed small units fighting separately. Hence *Battaglione*, the great *battaglia*, was the name given to the large fighting unit, consisting of a mass comprising several regiments and several thousands of men. This battalion was gradually diminished in size to meet changes in tactics which demanded a more flexible formation for mobility, and a smaller target for artillery. The experience of more successful leaders pointed

eventually to forming a battalion of a few hundred men, so that two or three could be furnished by a regiment instead of forming a huge battalion of several regiments.

The battalion thus from being one of the parts of a company came to be a unit composed of several companies, while the squadron (European), at first formed as we shall see, of several troops, soon were reduced in numbers until they were practically the size of the original troops, this subdivision disappearing.

The word squadron was also derived from the Italian, the corresponding word in that language being *squadra*, meaning square. This name was supplied to a body composed of several troops, and was so applied because the tactical requirements of the time called for troops formed in squares.

Cavalry was first organized into regiments by Maurice of Saxony, 1696-1750.

Cavalry first fought, as did the Infantry, in ten ranks, but through improvements introduced in both drill and discipline by Maurice of Saxony, the number of ranks was reduced to six, the squadron then numbering 300 men.

followed by Maurice of Saxony, but reduced the number of ranks to four. Gustavus Adolphus organized his cavalry along the lines of ranks to four. His regiments consisted of eight troops of seventy men each. He was the first to teach shock action. Cavalry still continued to fire from horse-back until the time of Frederick the Great, about 100 years later. Frederick forbade firing from horseback, formed his cavalry in two lines, and trained them to charge boot to boot in long lines at high speed over long distances. At first two troops composed a squadron; later four smaller troops composed a squadron.

The foregoing notes on the evolution of modern cavalry is almost entirely epitomized from the interesting and valuable work on Organization by Colonel Herbert Foster, Royal Engineers, British Army.

The history of the evolution of the German cavalry organization affords material for argument for advocates of the large, medium or small sized regiment. Not only did the different classes of the cavalry vary in the strength of their

regiments, but we find in some cases great differences in the strength of regiments of the same class.

Tracing briefly the history of the Prussian Cavalry, we find the following:

In 1718, mounted regiments consisted of five squadrons (ten companies of 130 privates each), and dragoons had the same organization.

In 1725, the company organization was discontinued, the dragoon regiments being organized into ten squadrons of 110 privates each, increased the next year to 120.

In 1726, one dragoon regiment was made into two regiments, and in 1727 another regiment was likewise changed.

From 1731 to 1735 all dragoon squadrons numbered 132 privates and five supernumeraries.

In 1734 the Hussars had the same strength as above.

In 1740 heavy cavalry and dragoon regiments consisted of five squadrons, and numbered 774 effectives and seventy-two non-combatants, total 846.

No further changes in the cavalry took place up to the Seven Years' War (1757-63).

In 1762 the strength of hussar regiments was increased to 1,500 men.

In 1799 a cuirassier or dragoon squadron numbered 31 officers and 810 men. The hussars had two battalions (10 squadrons), each regiment having 45 officers and 1,498 men.

In 1807 the cavalry was reorganized. A cavalry regiment was to consist of four squadrons each squadron to number 6 officers, 125 men, a total of 500 men.

In 1810 each cavalry regiment had a peace strength of 24 officers, 502 horses, and a war strength of 601 horses. All regiments were of four squadrons.

The strength of the German cavalry regiment to-day is 25 officers, 725 men, 678 horses. Regiments are mobilized at from four to six squadrons. The strength of the squadron is 150 men.

After Seidlitz no German cavalry leader appear to have gained distinction. The German cavalry after the death of Frederick the Great, according to German authorities, went backward.

During the Napoleonic Wars no German cavalry leaders of exceptional ability appeared, and the cavalry seems to have been of poor quality. It was almost invariably whipped by Napoleon's cavalry. It was during this time (in 1807) that the reorganization of the Prussian cavalry took place, the regiments of the different classes of cavalry being given the same strength, and all reduced to a strength of 500 men. We should not fail to note that at this time when the Prussians, under indifferent cavalry leaders, were reducing the strength of their cavalry regiments Napoleon desired to increase the strength of his. Whether the changes made by the Prussians were for economical reasons, or whether the poor work of the cavalry was attributed to its organization, is not known. The truth seems to be that the cavalry, both officers and men, was of poor quality, and, such being the case, a small regiment was more logical than a large one, especially as cavalry at that time depended almost entirely on shock action.

Blucher, in his report of the operations of the cavalry around Ligny, Wavre and Waterloo, was so bitter in his criticism of the work of that arm that many of the officers concerned considered his criticism as implying cowardice on their part. Naturally his report gave rise to much controversy, and to a number of articles written with a view to determining the causes of the shortcomings of the Prussian cavalry.

One writer, General von der Marwitz, at the end of a long article says:

"I will recapitulate the essential points which must not be disregarded if we are again to occupy our former preëminence:—

- 1.—Stronger regiments.
- 2.—More officers to the regiment, a consequence of No. 1.
- 3.—Transfers to be made as seldom as possible.
- 4.—Better horses.
- 5.—Revival of the art of horsemanship, etc."

He says further: "The number of officers in our cavalry is too small, only twenty-three, and that total is rarely maintained."

"The regiments in themselves are too weak * * * and the formation of some more by taking a squadron from each

and grouping every four of these squadrons to form a new regiment was a blunder of the worst kind at a time when we were almost in the face of the enemy."

In the report of General de Borstell (made in 1817), on the same subject we find the following:

"A strong regiment has more confidence in its own strength than in the support of several other regiments that adjoin it, p. 10. The regiments of Beling and Zieten, the Black Hussars, the Chestnut Hussars, and the Dragoons of Baireuth, would never have rendered themselves so redoubtable by their uniform and their name, if instead of being composed of ten strong squadrons they had only numbered three or four weak ones.

"In consequence we propose as a desirable amelioration the creation of regiments of cavalry 1,050 strong divided into six squadrons."

Blucher commenting on this report says:

"In the appended report General de Borstell has developed with a profound knowledge and much clearness the causes which up to the present time have exercised such a deleterious effect on our cavalry. With a frankness which does him honor he has indicated the remedies to be employed to give this important part of the army the perfection it should have for the good of all.

"I have very little to add to the report of General de Borstell.

Here we have the views of the ablest Prussian officers as to the strength of a cavalry regiment. As their opinions were formed after twenty years of almost continuous warfare in which cavalry played a most important part, it can hardly be said that they are not based on experience.

The French Organization.

Prior to the Revolution, cavalry and dragoons consisted of 689 men, chasseurs and hussars of 1,028 men (Organization and Tactics of the Three Arms, p. 232.)

The organization provided for on January 10, 1794 was as follows: Cavalry, 32 officers, 672 men. Dragoons, chasseurs, and hussars, 58 officers, 1,353 men.

In the Campaign of 1805 the organization of Napoleon's cavalry was as follows: Light cavalry, 43 officers, 947 men. Carbineers and cuirassiers 35 officers, 673 men; dragoons, 43 officers, 1,098 men.

Speaking about this time of cavalry organization Napoleon said:

"If I could put as many men in the cavalry as I desired I would never be deferred from carrying regiments of cuirassiers and dragoons of 1,000 men each and regiments of chasseurs and hussars of 1,200 men each, forming 4 squadrons of 300 men each."

In 1807 Napoleon directed that regiments of cavalry be given the following strength, the necessary men to be called from the reserve: Carbineers and cuirassiers 997 men; dragoons, hussars, and chasseurs 1,000 men.

In 1808 his cavalry was raised to 1,200 men per regiment.

It will be generally conceded, I think, that Napoleon knew how to make effective use of cavalry. He overlooked no detail bearing on the effectiveness of any branch of his army, and we may suppose that his cavalry, to which he intrusted such important duties and upon which he placed so much reliance, received an organization that had been given careful study by him. It will hardly be disputed that there were not opportunities in abundance for testing the efficiency of any organization adopted.

The French Cavalry after the Napoleonic wars.

In 1820 the subdivision of the squadron into two companies disappeared, and the squadron, which was already the tactical unit, became at the same time the administrative unit. Each regiment had, as before four squadrons. By 1829 all the regiments had been increased to six squadrons the hussars and cuirassiers which had only four.

About 1840 all the regiments had five squadrons, the fifth being a depot squadron.

In 1859 the cuirassiers and dragoons had a strength of 1,164 men and a depot troop. The hussars and uhlans had a strength of 1,816 men and a depot troop. The rôle of cavalry in this war was limited chiefly to action on the field of battle.

The French regiment of today has a strength of 44 officers, 787 men, and 734 horses.

From the close of the Napoleonic Wars to the close of the Franco-Prussian War the results accomplished by the cavalry of European nations were not such as would cause us to look in that direction for a model for organization or use of cavalry. Indeed as a result of its record in the Crimean, Italian, and Austro-Prussian Wars, there were many who thought its day had passed. Some said that the arms of precision had ended its career and that in the future it would be part of armies only because of historical traditions.

It is hardly necessary to comment on the work of the cavalry of Frederick the Great, or that of Napoleon. The former had large and small regiments, the majority small; the latter continued to increase the size of his regiments until they were 1,200 strong. The English at Waterloo with small regiments did excellent work, but the same, as we have seen, cannot be said for the Prussians. The simple truth is, as we are forced to conclude from what has been said that, so far as mounted action is concerned, results are a question of leadership and training, and not of the size of regiments. Assuredly there is nothing to warrant our saying that we must have small regiments for mounted work; and yet in an article by Colonel F. N. Maude, in the last edition of the *Encyclopedia Britannica*, we find the following:

"The existing organization of cavalry throughout the civilized world is an instance of the survival of the fittest in an extreme form * * * . The size of the unit next above the squadron, the regiment, is again fixed by the number of subordinates that an average commander can control, and the universal experience of all armies has settled this as not less than four and not more than eight. Experiments with eight and even ten squadrons have been tried both in Austria and Prussia, but only exceptional men have succeeded in controlling such large bodies effectively, and in the end the normal has been fixed at four or five squadrons in quarters and three or four in the field. Of these the larger number is undoubtedly preferable for with the work of the quartermaster and adjutant to super-vise, in addition, the regimental commander is economically

applied to the best advantage. The essential point, however, is that the officer commanding the regiment does not interfere in details, but commands his four squadron commanders, his quartermaster and his adjutant, and holds them absolutely responsible for results."

This article will, no doubt, be accepted by many as settling the question definitely and finally.

Up to the present we have discussed cavalry organizations admittedly based on the use of cavalry for mounted work and shock action only; for while the musket was carried by some classes of cavalry from the beginning of modern organization, dismounted action was very exceptional and of a very limited nature; and the men had little or no training in the use of fire arms.

When we consider that, a hundred years ago, the knowledge of the use of fire arms was limited to a very small percentage of the population of the different European countries, and that the flint lock musket was a cumbersome affair, and required the cavalryman, already sufficiently encumbered, to add considerably to the impedimenta carried by him, it is not surprising that there was not an early development of dismounted action.

The desirability of having his cavalry trained for such action did not, however, escape the brain of such a soldier as Napoleon. Efficiency was the idea always uppermost in his mind, and he was constantly striving to make his cavalry a force that could do something besides reconnoiter and charge. A letter written by him in 1811 to Clarke, his Minister of War, is interesting in this connection:

"It is recognized that it will be difficult for a cuirassier to make use of a carbine, but it also very absurd that from 3,000 to 4,000 of such brave men should be surprised in their cantonments are stopped in their march by two companies of voltigeurs. It is then indispensable to arm them. The regiments of cuirassiers of the old régime had muskets that they carried, not like the light cavalry, suspended from bandoleers, but carried to be made use of as guns.

"I desire that you form a board of cavalry officers and that you reach some conclusion on this subject. I am not accus-

tomed to see 3,000 picked men held up by a few light troops in a surprise or insurrection, or stopped in a march by a few bad shots posted behind a brook or a house. My intention is that each man have a gun. Whether it is a short musket or how it is carried matters very little to me. I gave the cuirassiers muskets during the peace, but they sent them back, and in the last campaign did not have them.

"Send me then your plans which will make it unnecessary to guard the cantonments of 3,000 men, and which will enable these men when they meet a very much smaller force of infantry to dismount and push on. War is composed of unforeseen events, and it is visionary to suppose that 15,000 heavy cavalry can always be so disposed that they can be covered by other troops.

"As to the lancers, see if it is possible to give them a carbine with their lance, if it is not possible it is necessary to have at least a third of the company armed with carbines, that is to say, all the front rank and a half of the second * * * . The Cossacks have the lance, but they have carbines and even long range guns."

And he says in another place:

"Cavalry of all descriptions should be furnished with fire arms and should know how to maneuver on foot—3,000 dragoons should not hesitate to attack 2,000 infantry, should the latter, favored by their position, attempt to stop them."

"Turenne, Prince Eugene of Savoy, and Vendome attached great importance to dragoons and used them successfully."

Speaking of dragoons, which, at first were not efficient, he says:

"But in Spain these very same regiments, when better disciplined, and after having had some experience in the field, during the campaign in Germany and France, in 1813 and 1814, proved rivals to the cuirassiers."

Under the circumstances it was hardly to be expected that the French cavalry after the abdication of Napoleon, should continue to develop along progressive lines. It is a matter of history, that like the rest of the French army, instead of going forward it went back. The French today advocate the use of dismounted action to a much less extent than their more pro-

gressive neighbors, the Germans, but there are a number of French officers of high rank who now look upon dismounted action favorably.

Von Moltke's description of the American Civil War as a "conflict between two armed mobs" seems to have been taken literally by German officers, and, as a consequence, they have not, until lately, made any study of that war.

The dismounted work of French's cavalry in the South African War seems to have led the German's to a study of dismounted action.

The German observer with French saw the latter make a highly successful mounted charge under exceptionally difficult circumstances one day, follow this up with a dismounted attack the next, and on the third day by defensive action dismounted hold his position in advance of the army against largely superior numbers.

While it can hardly be true, yet from the comments on French's dismounted work in the German Official Account of the South African War, one would certainly be justified in saying that the Germans had never before heard of such results being obtained from dismounted action. The comment referred to is as follows:

"It was owing to the gallant perseverance of the British cavalry and to the heavier and more effective fire of the batteries that a further and victorious advance of the Boers against the left flank was prevented, and that the whole Boer army was stopped for an entire day by scarcely more than a thousand dismounted cavalrymen. This was a very remarkable achievement, and it shows what cavalry fighting on foot can do when properly used, and of what incalculable value great masses of cavalry, trained in dismounted action, may be throughout a campaign. The capture of Cronje was chiefly due to the ability with which the cavalry division was handled and to the skill of its gallant and resolute commander * * *

"It is not possible to draw a clear picture of the employment and tactics of the cavalry, when fighting on foot, from what has hitherto been published on the subject. It appears, however, that the cavalry, imitating the tactics of the Boers, which had been so successful, was widely scattered in

groups on the kopjes and small eminences, while the horses were placed under cover in rear of their respective groups. This method of dismounted action for cavalry is unquestionably a very good one, and worthy of imitation, for a great extension of front when smokeless powder is used, may easily deceive the enemy as to the force which is in front of him. The increased power of the modern rifle favors a stout defense, and will render a decrease in the depth of formations all the less hazardous, because, in engagements, such as the one just described, it will generally be more important to make the enemy halt than to fight a decisive action. The combats of the English cavalry division on February 16th and 17th are of quite extraordinary value in this respect. When on the former date it endeavored a decisive action, and by attacking the enemy, to drive him out of his strong position on the heights of Dronfield, it showed itself unequal to the task; on the other hand, when, on the 17th it was merely a question of a stubborn defense in order to stop the adversary, the cavalry carried its duty in a brilliant manner, and rendered incalculable service."

French's failure to take Dronfield ridge by dismounted attack is, of course, easily explained. In the first place his cavalry was not by any means thoroughly trained in fighting on foot, and in the second place, French, knowing the more important duties ahead of him did not care to pay the price. Is there any conceivable reason why if a man is properly trained he should not be able to fight offensively as well as defensively? Does the fact that he rides a horse take this out of him?

Dismounted action is not merely a matter of theory with the Germans now, it is also a matter of practice, as the following from the German Field Service Regulations will show:

"By reason of its fire arms cavalry is also capable of dismounted action. It is thus in a position, and especially so when supported by horse artillery and machine guns, to offer resistance to detachments of all arms, or to cause them serious loss by unexpected fire action. Nor need it shrink from attacking should the situation require it. It will often have to combine dismounted with mounted action.

"Cavalry will often be obliged to clear the way for further activity by means of dismounted attack. Attempts also on

the hostile lines of communication (such as the capture of railway stations or magazines, the destruction of important engineering works, or the capture of isolated posts, etc.) On the battlefield, however, dismounted cavalry will rarely be pushed forward."

Von Bernhardt objects to the above paragraphs in so far as they lay emphasis on dismounted action for the defensive only. He thinks that at least the same emphasis should have been laid on the offensive.

General von Bernhardt is one of the ablest of the German officers and his views on the subject of dismounted action carry weight. He says in "Cavalry in War and Peace:"

"In the wars of Frederick the Great and Napoleon, as well as in the German War of Unification there is a total absence of analogy from which to draw conclusions that can be applied."

"The most interesting and instructive campaign for the service of modern cavalry appears to be the American War of Secession, which is, however, almost, unknown in Germany where there is lack of opportunity to study it."

" * * * I believe that only in exceptional cases will a purely cavalry combat take place, at all events on a large scale."

"We must not conceal from ourselves the fact that in future wars it will by no means always be a matter of choice whether we fight mounted or dismounted. Rather by himself dismounting and seizing the rifle will the opponent compel us to adopt dismounted action."

This is exactly what happened time and again in our Civil War.

Speaking of the campaign of 1870-71, he says:

"Again and again was it necessary to detail infantry to the cavalry divisions in order to brush aside by offensive action resistance that hindered the advance of the cavalry, and which could not be broken down even by the horse artillery which accompanied it."

He quotes the following from an English writer:

"Soon after the outbreak of the war (American Civil War) Stuart distinguished himself as a cavalry leader, and his strategical work in blindfolding the enemy and in enlightening his own army has never been surpassed. As a cavalry tactician

he is not only the first, but hitherto the only, leader of the arm who understood how to combine the effects of fire and shock, how to render effective service in fighting on foot without losing the power to strike on horseback when opportunity offered," and he adds: "Here, indeed, was a man worthy of emulation."

"We must, I think, be resolute in freeing ourselves from all old fashioned conceptions of those knightly combats which have in reality become obsolete owing to the necessities of modern war. We do not in this need to break with our ancient and honored traditions, for the spirit of tradition consists not in the retention of antiquated forms, but in acting in that spirit which in the past led to such glorious success."

"This principle has been embraced in all the other spheres of military development; it is only the cavalry that has remained behind the times."

"To reckon with the charge alone is, on the field of battle out of date, and calculated to limit the effect of cavalry action."

"The cavalry must not shrink, when necessity demands, from employing its whole force in the fire fight, disregarding for this purpose its purely cavalry rôle, which may, perhaps be resumed later.

"The first essential is that victory shall be won. To this end all forces must coöperate. We will find a good example to follow in the battle of Fredericksburg and the manner in which Stuart threw the whole of his cavalry into the fight. The employment of cavalry in the War of Secession in North America, the study of which I have urgently recommended, can here again serve as a guide to follow."

The German maneuvers of 1911 were witnessed by Captain E. D. Scott, Sixth Field Artillery, and the following extract from his report shows that the Germans are practicing what they preach.

"Great attention was paid to patrol work and apparently none to spectacular attempts. The infantry were not slow to say that the cavalry are really mounted infantry. The cavalry say that they are much superior to mounted infantry, but admit that they depend more than ever before on dismounted action. The tendency in this direction was well shown on one occasion. The Red cavalry division got on the flank of the

Blue right column unobserved, and attacked from less than 1,000 yards with eighteen guns and dismounted squadrons. The remaining squadrons remained mounted as a reserve. It was a complete surprise to the Blues. A better opportunity for a mounted attack could not have been desired. However, the attack as carried out was fully approved by higher authority. Some time later this division found itself on the flank of the victorious Blues, who were on the point of carrying the Red position. It looked like the psychological moment one reads about had arrived, and there seemed nothing to prevent the mounted charge, but again ten squadrons dismounted and advanced to the attack. The halt sounded before their attack was well organized and the exercises ended. Not much doubt as to the conduct of the German cavalry in the next war."

The following are extracts from a memorandum issued by Lord Roberts, in 1903, in explanation of his reasons for making changes in the armament of the British cavalry:

"In America, on the other hand, the cavalry leaders very early recognized the increase of power to be gained by arming their men with a rifle in addition to the saber. Their tactics against both cavalry and infantry were a combination of fire and shock, and their achievements were far more brilliant than those of the Germans of 1870.

It was by adopting these tactics that Sheridan's cavalry brought about the dispersal of Early's army on the Shenandoah in 1864, and the surrender of Lee's army on the Appomattox in 1865. In the former series of operations the cavalry fought in two pitched battles and drove the enemy back 130 miles in nine days (19th to 27th of September), capturing over 30 guns, 1,500 to 1,700 prisoners, and turning every position which the Confederates attempted to hold. The fighting was not all dismounted. During the battle of the 19th of September one division alone made six distinct charges against cavalry and three against infantry and artillery.

"It is said that cavalry cannot be trained to fight indiscriminately on foot and in the saddle; that on foot they will be very indifferent infantry and in the saddle very timid cavalry. * * *

"The truth is that it is a matter of training and discipline.

"The conclusion to be drawn from the above appears to me to be that cavalry will generally act dismounted, but that small bodies may effect surprise by shock action."

There is an article written by General Rodenbough in 1875, entitled "Cavalry of the Future," and there is a remarkable agreement between this and the above quoted remarks of Lord Roberts.

One paragraph of General Rodenbough's article reads as follows:

"The coming cavalry, in my opinion, will be essentially dragoons, and the prejudice still existing in European armies against such an anomalous organization will pass away before the progress of military enlightenment."

General Wesley Merritt, commenting on the above, says:

"It would be well for every one taking an interest in such matters to read this really wonderful prediction * * * . It is but another proof that our experience during the Civil War was a lesson that needs study, and what we learned then is well worth preserving and improving."

The present views of the British and Germans are not the result of theoretical study. They are the result of object lessons, and they have lately discovered that these are confirmed by our experiences of the Civil War.

We have given above the German attitude on dismounted action as stated in the Official Account of the South African War, and this view may be taken as having the highest official sanction. Official accounts are published by the Germans as a means of keeping their officers in touch with the latest developments in practical warfare; and the comments are the official view as to the lessons to be learned. We have seen that the German view has recently been given effect in the German Field Service Regulations, and that General von Bernhardt, the ablest of the German cavalry officers, a man who served through the Franco-Prussian War and has made a careful study of the work of our cavalry in the Civil War, thinks that the German Field Service Regulations fall short in not providing more specifically for offensive dismounted action. We have had the views of Lord Roberts, the ablest soldier that Great Britain

has produced for many years, and we have seen that his views are approved by a distinguished cavalry officer of our army.

May we not infer from what has been stated above that the Germans, the leading military nation of the world, will make much use of dismounted action in their next war and may we not also infer that as men and officers become better trained in applying its principles, and therefore better able to demonstrate its value, its use will be greatly extended?

The organization of foreign cavalry is admittedly based on its use for shock action. Will it be logical to retain this organization when the chief value of the cavalry is found in dismounted action? Will it be logical to retain in this arm an organization which cannot stand the tests so rigorously applied to the other arms, the tests of efficiency and economy?

The answer is obvious, but nevertheless, we need not look for changes in the organization of cavalry regiments of European countries for many years to come. There are several reasons for this. In the first place the cavalry was formerly in Europe, and probably is today to a greater extent than the other arms, the arm of the nobility, and the student of history knows how tenaciously this body clings to the past and its traditions. As to tradition, a military writer says: "The strength of tradition and inertia in armies is enormous. No human institutions, not the law, not even the church so cherish ceremonial and reverence tradition and custom, or remain so long blind to changed conditions. In military arrangements the very object of their existence often seems obscured by a haze of unessential conventions. Military methods, once unsuitable, soon pass into mere forms which it is considered sacriligious to modify, however useless or even harmful they may have become."

But suppose that the foreign powers had come to realize that their organization was not the best. Are there any practical difficulties in the way of a change? The answer to this question is that the practical difficulties are such that a change is almost if not quite impossible. The reason is that each European nation now has practically all the cavalry it can afford. A change in organization could be affected only by the consolidation of regiments. It is hardly necessary to speak of the

difficulties that would be encountered were an attempt made to do this.

The opinion held by many British and other foreign officers on the subject of dismounted action is interesting, if not peculiar.

General Sir Evelyn Wood says, writing in 1897 and speaking of dragoons:

"There are however, still some cavalry officers who argue that there is no necessity to teach selected infantry marksmen how to ride, alleging that cavalry on foot can do all that infantry can accomplish, and do it as well, if not better. These enthusiasts assert that it is possible so to train men as to render them equally efficient on horseback as they can be made perfect when on foot; equally confident in meeting an enemy whether armed with sword, lance or rifle. That this is an error there can, I think, be no doubt.

"After the death of Frederick the Great, 'Dragoons' were trained alternately on horseback and on foot, in the manner indicated by Rogniat, who wrote: 'How absurd is the manner of training our dragoons. When mounted they are taught that no infantry can resist the impetuosity of their charge, when drilling on foot they are taught to consider themselves invulnerable against cavalry. It is from these causes they are despised by both Horse and Foot.' "

Napoleon knew Rogniat, and commenting on his book, says: " * * * he is a stranger to the service of the infantry, the cavalry, the artillery and the staff."

Sir Evelyn Wood goes on to say, speaking of Napoleon's advocacy of the use of dragoons: "For the purpose of a British army, however, Napoleon conceded the whole argument when he laid down that 3,000 men trained to fight both mounted and on foot ought to be equal in fighting power to 2,000 infantry." Sir Evelyn evidently forgets to make an allowance for horseholders.

The above has been quoted to illustrate the strength of traditions and prejudice. One of the principle objections to cavalry is the expense of the arm. Mounted infantry, owing to its lack of training, ought to be more expensive than cavalry. The British solution, or rather the solution of some British offi-

cers, of providing for dismounted action is to provide an arm more expensive than cavalry.

It is not difficult to account for the development of dismounted action in our own army. Conditions in the early days were favorable in a high degree to the development of the practical and common sense way of doing things, and making the most of the means at hand, regardless of previous custom.

Before the Civil War a comparatively large proportion of the population of the United States knew how to ride and were familiar with the use of fire arms. The horse was necessary as a means of getting from one place to another, and the rifle frequently as a means of protection. Also in many parts of the country the two separately or together furnished the chief, and, in many cases, the only means of diversion. The rifle was frequently needed by the horseman as a means of protection. As he could not use it effectively on horseback, he dismounted as a matter of common sense.

We should expect a cavalry formed from such a population to develop along practical and common sense lines.

The nature of the duties of our cavalry prior to the Civil War was such that the rifle was practically its only arm of offense and defense. When the Civil War came on our cavalryman saw no reason why he should not continue to use his rifle as before, particularly as his opportunities for using the pistol and saber were comparatively rare. His practical nature and common sense again helped him out; and his lack of knowledge of the European definition of cavalry and the traditions regarding its use were of great value to him.

The time, the circumstances, and the men were all favorable for the development of a cavalry, the chief characteristics of whose organization and tactics should be common sense and efficiency. And it was developed.

Some European writers claim that our arm during the Civil War was not cavalry. The relationship, however, was sufficiently close for its work to furnish the European cavalry with grounds for continuing to exist.

A French writer reviews briefly the work of the American cavalry during the Civil War, but seems to think that some explanation for his doing so is necessary. He says: "A review,

then, of the means employed by the American cavalry is indispensable, because of the Crimean and Italian wars had, up to a certain extent, made the cavalry unpopular in certain quarters, we must recognize that the Americans are entitled to the credit of having restored it to its place of honor in modern wars."

There can be no question but that the fighting of the cavalry during the Civil War, Union and Confederate, was chiefly on foot. The Records of the Rebellion show this.

In a very valuable book entitled "Cavalry Tactics as Illustrated by the Civil War (Part I)," Captain Alonzo Gray has presented extracts from the reports contained in the Records of the Rebellion covering all the cavalry fighting of any importance of any kind that took place during the war on either side. He says: "All references show that a very large part of the cavalry fighting was done on foot." This will be apparent, I think, to any one who examines the Records. This does not mean that there was no mounted fighting. There was much of it. It was used when practicable; but the nature of the country frequently made such fighting impracticable. Both sides knew the value of dismounted fighting; and the weaker of two opposing forces generally avoided the mounted combat, and, by dismounting, forced his opponent to do the same. The custom of intrenching early adopted by the infantry reduced the opportunities for mounted action against that arm.

Sheridan says, speaking of the fight at Yellow Tavern: "This engagement, like that of the day before around Trevillian, was mostly dismounted by both sides, as had also been the earlier fights of the cavalry during the summer in the Wilderness, at Todd's Tavern, Howe's Shop, and Matadequin Creek. Indeed, they could hardly have been fought otherwise than on foot, as there was little chance for mounted fighting in Eastern Virginia. The armament of both parties, and the practice of barricading making it impracticable to use the saber with anything like a large force, and so, with the exception of Yellow Tavern, the dismounted method prevailed in every engagement." Two brigades fought dismounted at Yellow Tavern.

There seems to be no question either at home or abroad as to the value of the work done by both the Union and Confederate cavalry during the Civil War. The Union cavalry was reorganized in 1862; the regiments, twelve troops each, were given a strength of 1,200 men. In 1873 the three battalion organization was adopted in the Cavalry Tactics published that year. If results are any criterion, we may safely say that the organization of our cavalry during the Civil War measured up to the standard. Fortunately we have not only the testimony offered by its achievements but also the opinions of several distinguished officers.

The variety and extent of his experiences and his reputation as a cavalry leader entitle the opinion of General Wesley Merritt to great weight. Writing with the experiences of the Civil War fresh in his mind, he says, in an article entitled "Cavalry, Its Organization and Armament, published in the Journal of the U. S. Military Service Institute for 1879, and republished in the CAVALRY JOURNAL of March, 1913.

"All our experiences during the war of 1861-5 taught us we were well equipped and well fitted for cavalry service * * * . Our cavalry as now constituted is susceptible of the following organization: Each company to consist of 100 men, including non-commissioned officers; to be officered by two first and one second lieutenants; four companies, thus organized, to constitute a battalion, to be commanded by a major, three of these battalions to comprise a regiment, to be officered, in addition to those already named, by a colonel and his staff, and a lieutenant colonel * * * . A brigade to consist of three to five such regiments, and a division of three brigades. The brigade and division to be commanded by a brigadier and major general, respectively. Such in brief should be the organization of the cavalry, as far as it is necessary to characterize it for the purpose of war."

Have we any cavalry officer today whose experience or reputation entitles his opinion to more weight than that of General Merritt?

The following is an extract from the Memoirs of General W. T. Sherman:

"Inasmuch as the regular army will naturally form the standard of organization for any increase or for new regiments of volunteers, it becomes important to study this subject in the light of past experience, and to select that form which for peace as well as war will be the best.

"A cavalry regiment is now (1875) composed of twelve companies, usually divided into six squadrons of two companies each, or better subdivided into three battalions of four companies each. This is an excellent form, easily admitting of subdivision as well as union into larger masses.

"A single battalion of four companies, with a field officer, will compose a good body for a garrison, for a separate expedition, or for a detachment; and in war three regiments would compose a good brigade, three brigades a division, and three divisions a strong cavalry corps, such as was formed and fought by Generals Sheridan and Wilson during the war."

Speaking of the infantry organization he says:

"The ten company organization is awkward in practice, and I am satisfied that the infantry regiment should have the same identical organization as the cavalry and artillery, viz.: twelve companies, so as to be susceptible of division into three battalions of four companies each.

"These companies should habitually be about 100 men strong, giving 1,200 men to a regiment, which, in practice would settle down to about 1,000 men."

Some officers have contended that since many of the cavalry regiments were much reduced in strength during the Civil War their record is an argument for the small regiment. But since all regiments which accomplish anything in war are bound to quickly become reduced in strength, the small regiment, if it were able to accomplish anything, would supply an argument for a still smaller regiment, and so on, ad infinitum. If this argument were sound it would apply also to the infantry, for the greater part of their regiments were also much reduced in strength; but the infantry seems to be trying to bring its strength up to 1,500.

Some have said that the Confederate cavalry had the foreign organization, that is, the small regiment. This does not happen to be true.

In the act of the Confederate Congress providing for the regular military establishment, a cavalry regiment was to consist of ten companies of seventy-two men each.

In July, 1861, the Governor of South Carolina sends one regiment of 876 and another of 916.

In a circular of November, 1861, the Secretary of War says that cavalry companies must consist of at least sixty men.

The Confederate regulation of 1862 provide that a company of cavalry shall consist of at least sixty men, but that no company shall consist of more than 120 men rank and file.

On March 25, 1865, a general order was published giving the act of the Confederate Congress providing for the consolidation of companies, battalions, and regiments when reduced in strength. Companies were to be consolidated when their strength was reduced to thirty-two.

The subject of the organization of a cavalry regiment is discussed in the report on the Land Forces of the United States, War Department, 1912, where it is stated:

"As far as cavalry action of the future is concerned, the organization of that arm must facilitate (a) quick and powerful dismounted fire action, and (b) equally quick and powerful mounted shock action. At the same time the organization must be so flexible that it will permit the assignment of proper units as divisional cavalry—first, to meet the requirements of a division as part of a higher tactical organization, and, second, with a division or smaller unit acting alone. In addition the organization must be adapted to the formation of cavalry brigades and divisions.

* * *

"Not only must the organization of the cavalry regiment be so flexible as to meet all these requirements, but the organization decided upon must possess a high degree of mobility, and must be adapted to varying tactical situations.

"The present cavalry regiment has a total war strength of approximately 1,200 enlisted men. As now organized it is so flexible that it can be formed to meet almost any particular tactical situation. A squadron of four troops can be detailed and the remainder will form an appropriate command for a

colonel. If a detachment of three troops is all that is required, the remaining troops can be handled as three squadrons of three troops each. If it becomes necessary for the regiment in two equal parts each part can consist of six troops organized into two squadrons.

* * *

"It is believed that the President should be authorized to add an additional or headquarters troop analogous to that proposed for the infantry regiment and officered in the same manner.

"If the maximum authorized strength of the headquarters troop is placed as that of the cavalry troop now authorized, its actual strength can be determined by service requirements as determined experimentally. The headquarters troop should comprise a demolition section in lieu of the scout section of the infantry headquarters company.

"The band might be dispensed with and a trumpet corps organized with the trumpeters of the troops."

It seems to me that sufficient evidence has been produced to warrant our saying that 1,200 men is a suitable strength for a regiment of cavalry.

We have not considered the size of the troop, the organization of the squadron, the allotment of machine guns, or the question of depot troops. Several points raised in the above report also calls for consideration.

While there seems a desire on the part of some of our officers to have our regiments reduced to the same strength as the small regiments of the principal nations of Europe, none seem to favor the large troop (squadron) of those countries.

General W. H. Carter says: "The expedient of increasing each troop to 125 men, which was adopted several years ago during active service in the Philippines did not commend itself sufficiently to justify a continuance of such large troops (CAVALRY JOURNAL, Vol. XIX, p. 8); and one experienced officer on duty with the provisional regiments organized in 1911, at San Antonio, advocates a troop of seventy men.

The German view of the strength of a cavalry troop (their squadron) is as follows:

"In the case of cavalry, the squadron of about 150 men is the smallest unit, a number based on experience; 150 horses and the same number of riders can be rapidly inspected in the smallest detail by a single commander.

"About the same number is here adopted as that which the country farmer of North Germany considers feasible to keep on a single farm. If his business increases so that more than 150 men and a like number of horses and plough oxen becomes necessary they are distributed among outlying farms."

There is now no unit intermediate between the company and the regiment in the cavalry of foreign countries. This as we have seen, was not the case formerly. We have seen that the size of the squadron was reduced until it became in strength about what the troop had been, the troop becoming a platoon. The disappearance of the intermediate unit was the natural result of decreasing the size of the regiments. Napoleon's cavalry of 1805 was organized in companies and regiments, but the organization tables show two chiefs of squadrons for each regiment. With regiments as large as ours a unit intermediate between the troop and regiment is necessary. It is also desirable, since most of our fighting will be done on foot, to have an organization which will lend itself to this method of fighting. That this fact was early appreciated is shown by our adoption of the three battalion organization before it was adopted by the infantry of our army.

It is a question if we have not carried the application of the principle of uniformity too far in assigning an invariable number of troops to a squadron. We are taught to avoid the division of units, and, if we apply this principle strictly, we will, in many cases, with our squadrons organized as at present, use too few or too many troops for a particular mission. In Upton's Tactics the squadron was composed of from three to seven troops, and this provision was suggested to the author no doubt as a result of his war experience.

The squadron being a tactical unit, and according to Regulations, having no headquarters and keeping no records, there seems to be no good reason why it should consist of a fixed number of troops. It is a convenient organization in

time of peace, but in time of war our organization would certainly be more flexible if the number of troops were variable.

Napoleon says: "It is admitted that, for facility in maneuvering, the squadron should consist of 100 men, and that every three or four squadrons should have a superior officer."

The system, if we may call it such, now provided for keeping our regiments up to strength during time of war is the same as we had during the Civil War, and there is abundant testimony to show that it was entirely unsatisfactory at that time. We tried the depot battalion shortly after the Spanish American War, and found it unsatisfactory, why, I do not know; for there certainly seems to be no reason why this unit should not answer its purpose here as well as it has in foreign countries, where it has been in use for many years, and is regarded as of the highest importance.

The following order issued by Murat at Kirk, on the 27th of September, 1805, after his cavalry had crossed the Rhine at the commencement of the Campaign of 1805, shows the importance attached to depots by one of the greatest cavalry leaders of all times:

"It has been reported to his Serene Highness that some geneals commanding military divisions have sent away from the regimental depots of the cavalry all the officers and non-commissioned officers which regimental commanders had left there for the instruction of recruits. This measure contrary to the intentions of His Majesty, can lead only to the disorganization of the cavalry, and Prince Murat therefore orders that colonels whose depots lack officers and non-commissioned officers necessary for the instruction of recruits, shall send them there immediately. Generals of divisions are charged with the supervision of the execution of this measure."

General Upton discusses this matter fully in his "Military Policy of the United States." He says:

"Whatever policy we may adopt for replacing losses suffered by our regiments during war, it is certain that we should avoid that in use (if we may call it a system) during our Civil War."

He then goes into a discussion of the subject in detail under the headings, "Depletion of Armies," "Need of Regimental Depots."

The following from his book, p. 416, shows the working of the depot system in Germany which system is substantially the same now as then:

"The Landwehr battalion districts, the company districts, and the regimental depots are the links which, in foreign services, connect the people with the army. In each battalion district, in Germany, for example, there is a cadre consisting of a field officer and adjutant, and three non-commissioned officers. The rolls of all men in the reserve, in the Ersatz reserve, as also in the Landwehr, are kept at the district headquarters. A sergeant major or First Sergeant lives in each company district and serves as a medium of communication with the men at their homes.

"When war is declared, each regiment designates a battalion to serve as a regimental depot. It consists of twenty-two officers and may be recruited as high as 1,208 non-commissioned officers and men. The three battalions in the field, the depot battalion, the cadre of the landwehr battalion, and the company districts all form part of one and the same regiment. Whenever a regiment loses ten per cent. of its men from battle or disease, the colonel does not apply for recruits to the Adjutant General at Berlin, but sends an order direct to the commander of the depot battalion to forward at once the number required.

"No man after having been once enrolled in the army for active service, can skulk away and return to his home. The regulations require that all men in the reserve, the Landwehr-Ersatz reserve, or on furlough, shall, on returning to their company districts, report in person to the sergeant major."

"The Government thus knows where every soldier is, who owes military service. If one deserts and does not return to his home, he cannot long remain undiscovered by the many officers and men who are undergoing military training in the districts where he may seek refuge."

The lack of the depot system in our Civil War facilitated desertion, and increased enormously the work of collecting absentees, stragglers, and convalescents and forwarding them to their regiments. There was no way of communicating with these men at their homes except through the newspapers, there being no district sergeant major. And the officers with whom

such men came in contact had no regimental or local interest in the welfare of the soldiers. Such recruiting as was done for the purpose of providing for the losses of regiments was for the most part of a general nature. The result, as we know, was that the strength of the army was kept up by the organization of new regiments, while veteran organizations dwindled to mere skeletons.

It is interesting to note that regimental recruiting was abolished also during the Spanish-American War.

If we are to avoid the evils of the past we must make provision for the future. What General Upton has said on this subject is worthy of careful study.

General Sherman says on this subject:

"The greatest mistake made in our Civil War was in the method of recruitment and promotion."

He then speaks of the custom of organizing new regiments instead of filling up the old, and says:

"I believe that 500 new men added to an old and experienced regiment were more valuable than a thousand men in the form of a new regiment, for the former by association with good, experienced captains, lieutenants, and non-commissioned officers soon became veterans, whereas the latter were generally unavailable for a year. The German method of recruitment is simply perfect, and there is no good reason why we should not follow it substantially."

In his letter forwarding the reports of officers on the provisional regiments into which the Eleventh Cavalry was divided while at the division camp at San Antonio, in 1911, General W. H. Carter makes the following recommendations:

"I now recommend for trial a rearrangement of our cavalry regiments in conformity to the following scheme: A regiment to consist of three active squadrons of three troops, each troop with an authorized strength of 100 men. One of the three remaining troops of each regiment to comprise the machine gun detachment, a wireless communication detachment, trained scouts, orderlies, regimental clerks, etc. Two troops of each regiment to be given fixed stations and to constitute the recruit and remount depot for the regiment. The officers of the two depot troops to constitute recruiting officers, and none

others to be detached from the regiments. The lieutenant colonel to habitually command the depot troops, and, in case several regiments have depot troops at the same post, the senior to command so far as post administration is concerned. With the development of the brigade and division cantonments, some valuable reservations and buildings will be available for this purpose.

"The experience in this division makes it certain that skeleton organizations, filled with recruits on the eve of active service, is about the worst possible form of economy. Regiments under this system are reduced so greatly in efficiency at critical periods as to jeopardize their morale. All recruits at regimental depots would be more carefully trained than at general depots. All recruits, whether cavalry or infantry, should be instructed, vaccinated for small pox and typhoid fever, and passed through quarantine for measles, mumps, and other diseases which have been brought to this division to so large an extent from recruit depots.

"It would be entirely practicable to train remounts at regimental depots.

"This system will retain our present cavalry organization intact, but distribute in a way to secure greater efficiency at less cost of time and energy and money."

The machine gun has demonstrated its usefulness beyond doubt. It will be an adjunct of great value to our cavalry, which has made and will continue to make so much use of dismounted action. Having had no experience in actual warfare with these guns we should study the experiences of other nations until such time as we shall be able to draw conclusions from our own.

The Germans, who have given much study to the question of machine guns, make them a separate branch of the service, the idea being to increase their efficiency by developing specialists. This would seem to be the better arrangement were it not for the fact that a cavalry regiment is at any time liable to have to act alone. With the machine guns a part of the regiment they would always have its guns with it. In this case, also, the regimental commander should be more familiar with its training, tactics and possibilities.

In the Russo-Japanese War the Japanese started out by assigning batteries of six guns to infantry and cavalry brigades. They found, however, that six gun companies furnished too large a target for artillery, and guns were assigned singly or in pairs to infantry battalions. It is now their intention to permanently attach a six gun section to each regiment of infantry, and an eight gun section to each brigade of cavalry. The Russians at the beginning of the war had several machine gun companies attached to divisions. Russia now has a six gun detachment for each cavalry division.

The British attach two machine guns to each cavalry regiment and infantry battalion.

The composition of a detachment for handling two guns seems to have been pretty well worked out in our service. The only question now is as to the number of guns to be assigned to a regiment, and whether, if we are to have more than two, they shall constitute an independent detachment or be assigned to squadrons.

I can see no especial reason for assigning guns permanently to squadrons. In such a case it is not probable that the guns would be allowed to follow the squadrons on the march, but that they would be assembled and marched at the rear of the regiment. It would seem to be better to have such guns as are assigned to the regiment placed under the direct control of the regimental commander, to be assigned by him to squadrons as necessity required or otherwise disposed of according to circumstances.

Experiments with a machine gun troop provided with six guns were carried on in our service for a couple of years, and have only recently been discontinued. It is believed that this troop was organized on the recommendation of General Montgomery M. Macomb, who was one of the American observers during the Russo-Japanese War.

Whatever their number, the guns should be assigned in pairs. The machine gun troop or detachment should have at least four guns. This would permit of two guns being assigned to a squadron temporarily detached for some special duty, and leave two for the remainder of the regiment. Probably this would be sufficient. Adding another machine gun platoon

to the proposed headquarters troop would bring its strength to eighty-two. It will probably be possible in the near future, owing to the reduced size of the machine gun to reduce the size of the detachments necessary to man them.

As to divisional cavalry, to my mind the employment of cavalry with infantry divisions, while a necessary and important use, may be considered a subsidiary use of the arm, and its employment for this purpose should have practically no influence in determining the size of the regiment or determining its organization in other respects.

The number of cavalry employed for this purpose will bear a relatively small proportion to the number used for other purposes. Von Bernhardt says, in "Cavalry in Future Wars:"

"There remains, therefore, for the divisional cavalry only the service with the most advanced of the infantry outposts (orderly duties with the infantry pickets in cases where the ground precludes the use of the cycle), duties connected with requisitioning; and reconnaissance only during those periods in which the mass of the independent cavalry has been drawn away towards the wings of the army to clear its front for battle, carrying messages during the combat, and actual reconnaissance during the progress of the engagement itself. All these requirements can, I think, be met with a very small amount of force. All the more so because reconnaissance under fire in modern war seems to me practically impossible, and can generally only be initiated by those divisions which form the wings of the army, but even then their field would be a very limited one.

"The scale on which we must decide the appointment of divisional cavalry must depend on the fact that infantry does not generally operate in small detachments, but works in large masses, and it is the necessities of these large masses which fix the standard.

"To apportion to single columns or divisions for particular circumstances an increased force of cavalry to be taken from the available mass of independent cavalry divisions, ought not in general to occasion unusual friction; but it is most difficult and troublesome to take away from the infantry the squadrons

definitely assigned to it by peace time organization, and unite these under independent cavalry commanders.

"We must, therefore, lay down as a principle that as much cavalry as possible is to be organized for strategical independence, and as little as expedient retained for the infantry divisions.

"My opinion is that, if we make the fullest use of the bicycle and, with this object in view, reorganize our system of conveying orders and intelligence, then two well trained and effective squadrons (300 men) should amply suffice for the ordinary duties with an infantry division."

One of our regiments as at present constituted is very probably considerably more than should be assigned to a division. This, however, can probably be easily arranged in time of war by assigning regiments which have become reduced in strength to the divisions, replacing them with the larger regiments, which can then go to the independent cavalry.

Comparing large and small regiments as to mobility the small regiment, of course, has the advantage; still it can not put more men on a charging line in a given time than a large regiment.

We hear a great deal about mobility, flexibility and surprise. Many speak of the cavalry always being ready for instant action in such a way as might lead some to think that we land upon our unsuspecting prey somewhat after the fashion of the wily tiger. If one of our principal duties is to cover the other arms and obtain for them early information of the enemy we ought to be able to secure information for ourselves in time to enable us to take up a formation suitable to the circumstances. Our Drill Book prescribes formations suitable for marching across country from which we may pass quickly to a formation for mounted or dismounted action.

A large regiment, as has been stated, has more confidence in its own strength than in the support of several other regiments that adjoin it; it can make detachments and still leave a command suitable for a colonel; it can, of course put more men on the dismounted firing line than the smaller regiment; its efficiency for shock action was proved in our Civil War and in the Napoleonic wars; it simplifies administration by reducing

the number of units; and last, but by no means least, it is more economical.

I can see no reason for making essential changes in the organization as it now stands.

Due principally to improvements and changed conditions, the following minor changes seem to me necessary:

The following additions to the present legal organization:

To each troop:

One stable sergeant,
One horseshoer.

To each squadron:

The headquarters detail now provided by general orders of the War Department.

To each regiment:

A depot troop with the same organization that other troops now have except that the corporals and sergeants are increased to ten each.

A headquarter detail similar to the one now authorized by War Department orders.

A headquarters detachment comprising all enlisted men of the regiment not assigned to troops.

There are in our branch of the service some officers who advocate a smaller regiment, an organization having about the strength of the French or German regiment. It is believed that the number of such officers is small, a very decided minority of the whole. Experiments have been made with smaller regiments, and a Board of cavalry officers is now considering the question of a proper organization for our cavalry. What its recommendations will be is not known; and what effect these recommendations will have, if a change is recommended, is problematical.

It is recognized by all that any changes made must be of such a nature as not to call for an expense above the present cost of the arm; and some organizations meeting this requirement have been proposed.

In the *CAVALRY JOURNAL* for July, 1911, Captain Mathew E. Hanna, since resigned, gives in detail the organization of a two and three troop squadron regiment conforming to the above idea, that is, necessitating no additional expense. This article appeared shortly after experiments made with provisional regiments organized somewhat along the same lines.

In both the organizations considered by Captain Hanna the proposed regiments have three squadrons. The troops in the two troop squadron regiment have a peace strength of eighty-five men, in the other of eighty men. In both the troops have the same war strength, one hundred men. Both have a headquarter troop of the same composition three officers, the Band, organized as now, machine gun platoon (22), and additional men for Headquarter detachment, the latter the same as now provided for by Field Service Regulations except that one cook is added. Each has a depot troop of three officers and fifty men.

In the first, the two troop squadron regiment, the peace strength of the squadron is eight officers and one hundred and seventy four men, and of the regiment, thirty-five officers, one chaplain, one veterinarian, and 639 men.

In the second, the three troop squadron regiment, the squadron has a peace strength of 11 officers, 244 enlisted men, and the regiment a peace strength of 44 officers, 1 chaplain, 1 veterinarian and 849 enlisted men.

The enlisted war strength of the first, omitting the depot troop, is 685, and of the second, 985.

The first or smaller organization formed into twenty regiments would increase the number of officers by twenty-five, the second—the three troop, three squadron regiment—would reduce the number of officers by ninety, fifteen regiments being provided for.

Examining the tables prepared by Captain Honna in reference to the three squadron—fifteen regiment organization—we find the following:

Gains:

- 45 supply sergeants, squadron,
- 76 corporals,
- 199 privates.

Losses:

- 90 officers,
- 30 first sergeants,
- 150 sergeants,
- 30 supply sergeants, troop,
- 45 cooks,
- 15 farriers,
- 15 horseshoers, (the number of horses being slightly increased),
- 15 cooks,
- 45 trumpeters.

The 45 supply sergeants gained are practically non-combatants; so that, to balance a gain of 76 corporals and 199 privates, we have a loss of 90 officers, 30 first Sergeants, 150 sergeants, 30 troop supply sergeants, and the other men named above.

The following additional criticisms can, I think, be made of the proposed organization:

The troop: No stable sergeant provided for. Experience shows that one is necessary for each troop. Each troop is provided with only one horseshoer. This would not be sufficient, especially for field service.

The depot troops are given the same allowance of non-commissioned officers as the other troops. The object of these troops is to prepare men to take the places of those lost on service, and as, for various reasons, the full quota of non-commissioned officers will seldom or never be available, for this purpose, it would seem to be wise to increase their number to ten sergeants and the same number of corporals.

For convenience of administration the non-commissioned staff should be made part of the headquarter troop.

The two organizations discussed above seem to have been suggested by the experiments that were carried on with somewhat similar organizations formed from the Eleventh Cavalry, then (1911) a part of the Maneuver Division, of Fort Sam Houston, Texas.

The regiment was organized into the First and Second Provisional Regiments on April 4th, and the experiments continued for about one month.

The First Provisional Regiment was composed of two squadrons of three troops each, 14 officers, 575 enlisted men. The Second Provisional Regiment was composed of three squadrons of two troops each. The strength of this regiment varied from ten to fifteen officers, and the troops averaged about sixty men for the drills that were had.

All officers were required to report on the effectiveness of the provisional regiments as compared with the old organization; the following reports being covered in each report:

(a) In movements in close order, taking into consideration handiness and number of men brought into action; (b) in the charge; (c) in the battle exercise dismounted, acting independently; (d) in a general engagement, dismounted, as part of a large cavalry force; (e) (as to regiments) in raids; (f) (as to squadrons) as contact squadrons; (g) as advance and rear guards; (h) in outpost duty; (i) in the order of march; (j) as suitable commands for colonels and majors; (k) as concerns administration, discipline and supply.

Reports were made by Major General W. H. Carter, Brigadier General W. S. Schuyler, Colonel James Parker, Eleventh Cavalry, and twenty one officers of the Eleventh Cavalry—two lieutenant colonels, three majors, five captains, eight first and three second lieutenants. The reports of the regimental officers were in the form of answers to the questions above.

General Carter says: "An organization should be the one best adapted to our use without servilely copying any other nation. No other nation has so consistently adhered to the development of fire in its cavalry as has the American army for fifty years, but all have made progress since the Civil War in America, and especially since the British War in South Africa." He recommends further experiments with three troop, three squadron regiments; the remaining three troops of each regiment to be used, one as headquarter troop, and the other two as depot troops.

General Schuyler prefers the three troop, three squadron regiment, but states: " * * * there is great justice in the contention that for dismounted fighting the large squadron of four troops has great advantages, and when the day arrives

that the cavalry must form a great mobile army reserve to move rapidly to reinforce points where the necessity has been indicated by the wireless or aeroplane service, we shall find the large regiment of three squadrons of four troops demonstrating its justification. We must understand that our cavalry is usually to fight dismounted."

Colonel Parker favors the present organization, but says: "In movements in close order, mounted, taking into consideration handiness and number of men brought into action, the three troop squadron is to be preferred. Experience has shown, however, that the four troop squadron is a handy force. The six troop regiment is handier than the twelve troop regiment."

One lieutenant colonel favors the three troop squadron; and one says, speaking of foreign countries: "When we find that all have smaller cavalry regiments than we, the average being about half that of our cavalry regiments at war strength, may we not conclude that probably they are right, and we are wrong?"

One major favors the three troop, three squadron regiment with a strength of about 700 men. One favors the three troop, three squadron regiment for mounted, and the four troop squadron for dismounted service.

One captain favors the three troop, three squadron regiment, the remaining four captains the old organization.

Six first lieutenants favor the three troop, three squadron regiments, and three the old organization.

Two second lieutenants favor the three troop, three squadron organization.

Considering their reports the majority of the officers of the regiment seems to favor an organization different from the one we now have. Considering the officers with the rank of captain and above, they seem to be evenly divided; but some of those favoring a new organization qualify their approval of it very materially by stating that they prefer the present organization for dismounted service. Practically all of the officers say that the present organization is preferred for dismounted action.

General Carter in his report says: "It is not known just what led the War Department to order the experiment as to these particular organizations of a regiment."

GOVERNMENT HORSE BREEDING IN FRANCE. AND HUNGARY.

BY COLONEL SPENCER BORDEN.

THE signal victory won by a team of French officers at the last Horse Show at Olympia, London, makes the study of French methods of horse breeding a matter of great interest.

That success, however, was more an illustration of superior horsemanship than of extraordinary horses. Baucher was a Frenchman. He was the originator of a system of training horses, and of correct riding, which have been followed by his countrymen, and others, ever since his day. From his time forward no one unacquainted with his methods could justly lay claim to being a finished horseman.

Contrary to the common belief, the English are not good horsemen. Their horses are ill trained, the men are not good riders, excepting such riding as is involved in not falling off a horse that is jumping obstacles.

That was a travesty of judgment, in the Charger Class at the New York Horse Show of 1910, when, of the team of French officers who came with well trained horses from the great cavalry school at Saumur, Lieutenant Jolibois, riding perfectly a mare that made no mistakes—one of the very horses that won at Olympia in 1912—could get no better than third place. No wonder the French did not come again to Madison Square Garden.

As noted, the French have given much attention to the matter of horse breeding.

What they call "L'Organization des Haras," the Government Horse Breeding Bureau, was established by Colbert, for Louis XIV, in 1665.

The ordinance of that year declared the object to be in order that—"the subjects of the King should no longer need to take their money to foreign countries for the purchase of horses."

Stallions were brought from Friesland, Holland, Denmark and Barbary. The larger horses were scattered through the country from Bretagne to the Garonne, "wherever there were mares of proper size," the Barbs were placed in the interior of Poitou, Saintonge and Auvergne.

It was decreed that mares which had produced foals should be exempt from seizure, either for taxes or imposts of any public nature, or for private debts.

The breeding studs, in effect, were for the purpose of furnishing remounts for the army, which Louis XIV reorganized giving it new uniforms, and placing promotions of all kinds under the control of his War Minister, Colbert.

That army, which had been reduced to 72,000 men by the treaty of the Pyrennees, was gradually increased to meet the bellicose projects of the King, and its cavalry soon numbered 30,000, for whom remounts had to be found.

In addition to these, the Royal household was very numerous, since the officers of the army disbanded in 1660 had been kept together as private attendants of the King. This body also had to be supplied with horses before they could take any part in operations against the Sultan, and to carry its members to victory in Flanders, the Franche-Comté, and to the Rhine.

Laws passed in 1665, 1668, and 1683, compelled every parish to keep a record of the number and quality of its entire horses, and of its mares suitable for breeding.

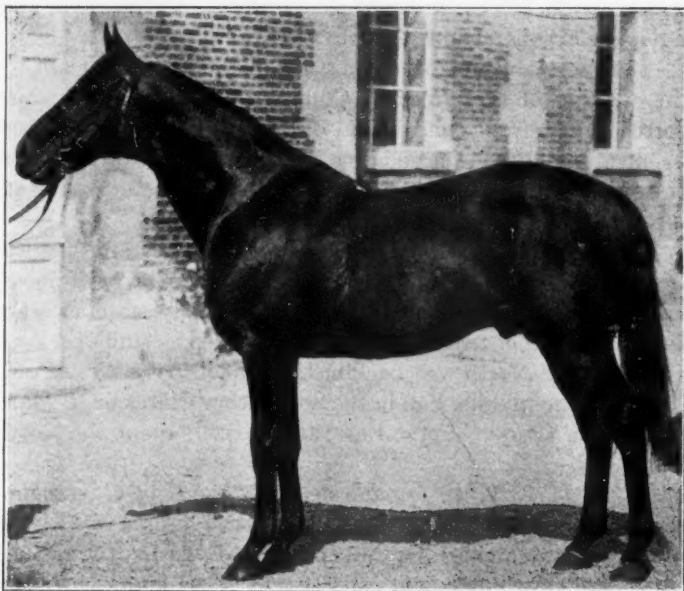
Proprietors of whatever condition in the State were required to have their stallions approved and marked, so under control of the Government, which prescribed the size demanded, and forbade, under penalty of 300 pounds fine, their use in the stud before the age of four years. They were also forbidden doing any work so long as they were in use for breeding purposes.

Later—February 24, 1717 and June 26, 1718—laws were passed dealing with mares suitable for breeding, assuring the quality of their offspring by indicating the stallion each owner intended using. These must be approved by a Government Inspector. It was also forbidden that any such mare should run in the same pasture with any stud colt one year old or over.

Coming along to 1790, we find two types of establishment under the control of the Royal Directeurs des Haras.

1. The breeding studs proper, including 300 brood mares reserved to the supply of horses for the hunts and riding of the Royal household, the Haras du Pin organized in 1714, and the Haras de Pompadour which became crown property in 1760.

2. Stallion depots, for the purpose of bringing approved stallions within easy reach of peasant proprietors through the country, who should desire to use them.



CUT 1. BRUCE.

A thoroughbred stallion from Le Pin. Shown at the Concours Hippique International at Paris, in 1900. An excellent type although he might have more bone below the knee.

There were also provincial breeding studs, some belonging to private individuals, others to certain of the great nobles.

So great were the privileges granted to some of these proprietors, taking the form of reduction of taxes and exemption from contribution to public funds of various kinds, the Revolu-

tionary National Assembly abolished the studs altogether in 1790.

The wars of Louis XIV are said to have cost France 100,000,000 francs (\$20,000,000) in money spent for horses alone. Yet in 1788 nearly one-half the cavalry of France was mounted on horses bought from foreigners.

When Napoleon Bonaparte became Emperor, in 1806, one of his first acts was to establish anew the State Breeding Studs. To fill the voids made in his cavalry by the battles of Marengo, Ulm, and Austerlitz, he was compelled to provide horses afresh before he could undertake to win at Jena and Eglau, at Friedland and Wagram.

The reestablishment of the studs in 1806, was followed by the creation of the Breeding Council in 1809. An Imperial decree issued from Schönbraun on May 17, 1809 established a central committee charged with the care of—"the propagation of horses, improvement of the horse breeding establishment, the veterinary profession, and the art of riding."

The Napoleonic decree of 1806 not only reestablished the Government Breeding Studs, it enlarged their usefulness. Six Haras were decreed, in four of which only stallions were kept, in the other two mares and colts as well as stallions.

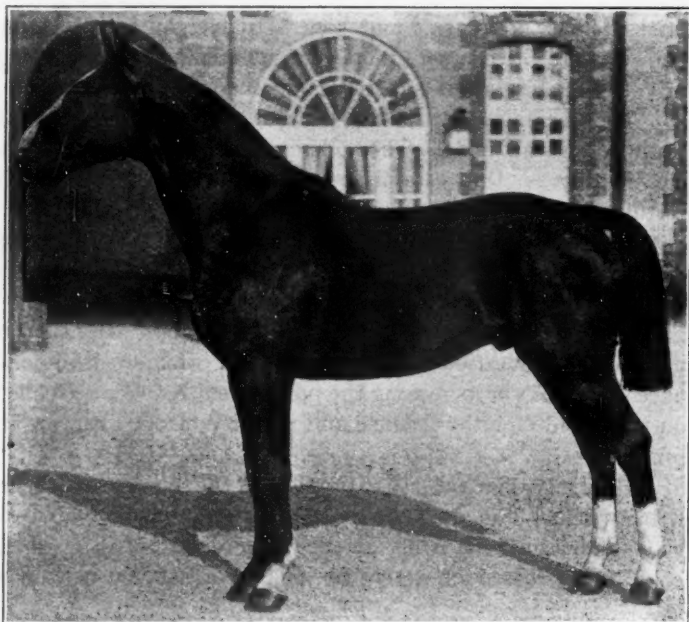
In the North was Le Pin, Langonnet in the West, Pompadour in the middle, Pau in the South, the "Haras de la Mandrerie de la Venerie" in the East, and Deux Ponts in the North East.

May 28, 1822, witnessed a decree of the King rearranging the management of the Haras. Another of January 16, 1825, reaffirmed the use of Le Pin, and added Rosières, as studs where stallions, mares and colts should all be kept, as feeders of stallions to the other studs and twenty-four stallion depots throughout the country.

On November 12, 1828, still further attention was given to the Administration des Haras. A commission of ten to administer all the affairs of the Government Studs was appointed its President being given full powers vested in the former Director General. Three Generals of the army, three private breeders, and the oldest Directors General of the studs were called to serve on that commission, whose President was the

Duc d'Escars. This commission greatly developed the studs of Le Pin, Pompadour, and Rosières by especial attention to the brood-mares of those studs, a Royal decree of 1833 on the report of M. Thiers, then Minister of Agriculture and Commerce, being the moving cause for the addition of Pompadour to the other studs.

Under this impulse the Administration des Haras developed in an extraordinary manner. Between 1815 and 1834



CUT 2. INTRIGUANT.

Half thoroughbred stallion from Le Pin. Paris Exposition of 1900. A horse of good bone, a bit lacking in his body but generally of substance. His cold blood appears in his coarse head.

they brought 1,223 stallions from Arabia or England, 8,530 of Norman race and 826 of the best of other French breeds.

Further changes were made in 1848, 1850, and again in 1852, a law of the latter date establishing trotting races, stallion races, riding schools at the different Haras, and brood mares

at Le Pin, though it greatly reduced the size of Le Pin, that same year.

In 1841 Rosières was closed out. In 1860 breeding at Pompadour ceased, and from that time forward dependence was had on mares privately owned, for whose use stallions were supplied through the stallion depots.

Then another commission was established to which was assigned the duty of managing stallion depots, passing on the qualifications of stallions offered to the Government, giving prizes for brood mares, and general oversight of all Horse Shows where Government money was offered as prizes, visiting private breeding studs and reporting thereon.

This arrangement lasted till the disasters of 1870, the Franco-Prussian War. Then chaos reigned till 1874. The law of May 29, 1874 established the system now in force with certain modifications.

The necessity for this renewal of Government breeding studs was thus summarized by M. Bocher in the opening of his report on the subject to the Corps Legislatif:

"The subject immediately demanding our attention is not merely a question of agricultural and commercial importance, even that of increasing the public wealth. We are called on to provide for the defense and security of our Country itself."

He then explained that to provide for the security of France, there was demanded at the time he spoke at least 80,000 or 90,000 horses for the Army on the peace footing of 1874, which could be increased promptly to 250,000 or 260,000 in case of war.

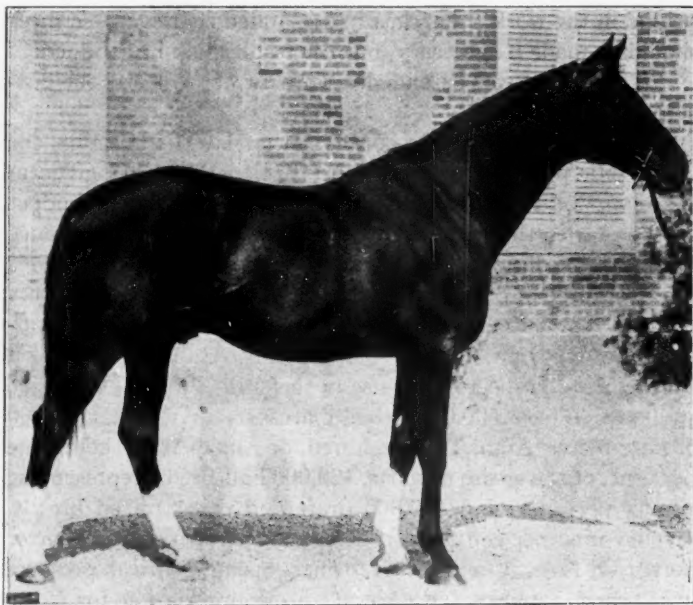
This demand involved the existence of at least 76,000 horses in the country on which the army could promptly lay its hands in case of mobilization. "Can they be found?" asked M. Bocher. "Yes!" he declared,— "but the quality would be bad, for the reason that the mixing of breeds in the country had left only such as were fit for farm work, and these were of no value as military horses."

Here we find an exact statement of conditions in the United States at the present time. With thousands, even millions of horses, nearly all are of the slow moving draft type.

Such as are suitable for military horses do not exist in sufficient number, nor are they being bred.

M. Bocher urged that the horses needed for the army could only be made available by reestablishing the Government breeding studs, especially Pompadour, and basing operations on pure blood, Arab, Anglo-Arab, and Thoroughbred.

In the argument following the introduction, of M. Bocher's report in the Corps Legislatif, M. Griviat, Minister of Agri-



CUT 3. ZUT.

Anglo-Arab from Le Pin. Might have more bone below the knee. His capped hocks are result of accidental conditions and need not be considered. He is a better type than either Bruce or Intriguant.

culture, expressed his opinion that the enactment of such a law as was suggested, though called a military law by its opponents, was not an extravagance, but a precautionary law, which necessity made obligatory. He declared that when a law was passed reorganizing the army, which reorganization

called for 90,000 horses in time of peace, the country involved itself in the obligation to find the horses. This obligation demanded not only encouragement to private breeders, but direct intervention by the State, which must increase the number of stallions belonging to the Government.

The Marquis of Dampierre supported the views of the Minister of Agriculture, adding that since all other European powers occupied themselves with securing sources of supply of horses suitable for military purposes, France must not fall behind in the work. Patriotism demanded that even sacrifices should be made if necessary, but the result must be attained.

The debate was extended. The law of 1874 was the outcome.

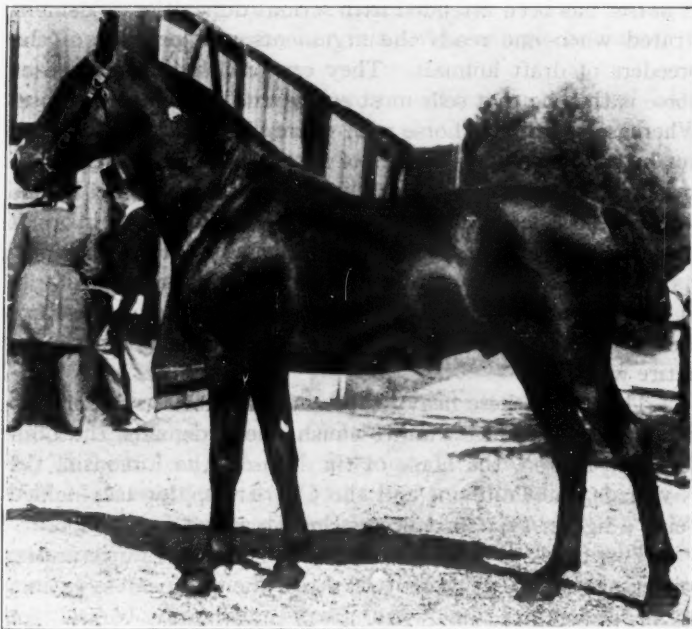
Not to dwell upon the details of that law, its effect in the thirty-four years of its operation (1874 to 1908) was given in the report of M. Fernand David, when presenting the budget of the Agricultural Department in the latter year. France had at that date 3,000,000 horses, including 600,000 mares used for breeding purposes. Of this number 161,414 were bred to Government stallions in that year, 81,207 to stallions approved by the Government, 9,467 to stallions authorized by the State Inspectors for use in the stud, 300,000 to outside stallions. These 600,000 brood-mares are divided into 6,000 of pure blood (Arab, Thoroughbred, or Anglo-Arab) being one per cent. of the entire number, 120,000 half-breds, representing twenty per cent., and 400,000 draft and other mixed breeds, seventy-nine per cent. It is this large number of the coarser horses of France, with their owners using political pressure upon their deputies for part of the appropriation for horse breeding, which have become the serious menace toward deterioration of the army remount supply, against which the officers of the army have to raise their voices.

M. David called attention to the fact that according to the principles of breeding guiding the Administration des Haras, the pure blood animals alone can be considered an element of amelioration for the horses of France, and on these should be concentrated the attention of the Government.

These are the ones that must be called on continuously to raise the quality of the others. Possession of even fractional

amounts of pure blood made animals possessing it better fitted for the use to which they might be put.

By the operation of the political influences already mentioned, this pure blood has become greatly diminished, though it was widely distributed. Of the 161,414 mares bred to Government stallions in 1906, there were but 3,889 of pure blood, 2,276 English Thoroughbred, 215 pure Arabs, 1,398 Anglo-Arabs. Of these 3,889 pure bred mares, 2,884 were wisely



CUT 4. TAM TAM.

A Barb stallion from Algeria. A wonderfully powerful little horse. Note his tremendous bone, substance and look of endurance.

reserved for reproduction of a pure race, 1,160 for English Thoroughbreds, 138 for pure Arabs, 1,586 for Anglo-Arabs.

These 2,884 mares were bred to 583 Government stallions, 233 of these English Thoroughbreds, 104 pure Arabs, 228 Anglo-Arabs. These same 583 pure bred Government stallions

were bred to 19,733 of the 102,262 half-bred mares sent to Government breeding studs, 6,869 to the English Thoroughbreds, 3,649 to the pure Arabs, 9,215 to the Anglo-Arabs; but twenty-six of the best of the pure bred stallions were reserved for use with pure bred mares of their own race.

Sixty-six pure bred Arab mares were reserved for reproduction of pure breds of their own race, and one for breeding an Anglo-Arab.

That this effort to maintain a supply of the highest type of horses has been attended with serious difficulties, is demonstrated when one reads the arguments and protests of the breeders of draft animals. They cry out that their type of horse is the one that sells most easily, and costs least to raise. Whereas an ordinary horse with warm blood in his veins cannot be sold before three years of age, the draft horse becomes an object of trade at two years, and even younger, and he has consumed less feed. It is the purely commercial view in opposition to that of those who would encourage improved types. As the jury of awards at the International Exposition at Paris, in 1900, states the case: "France is, *par excellence*, the producer of draft horses; in this respect she takes first rank in the entire world."

The list of these heavy types includes the Percheron, the Boulonnais, the Picard and Flemish, the Ardennais, the Con- tois, the Breton, the horse of the Marais, the Limousin, the Nivernais, the Poitevin, and the Charlerois, this last named being a lighter type, mixture of English and Norman blood.

Two types of light horses once existing in France are no longer numerous. The first of these, the one nearest extinct is the Merlerault. One writer speaks as follows:

"Merlerault, so noted in early days throughout Normandy for its beautiful horses, Merlerault, which truly furnished our cavalry horses in bygone days, those that carried French cavaliers to the four-corners of the world! We have done with them as was done with the fabled goose that laid golden eggs; we were not content to leave them as they were, we tried to make them bigger, and killed the race. Why should they be made bigger, when they were so good as they were originally! What are the first requirements of a saddle horse?

Beauty, distinction, good blood, good gaits. Now, the old Norman horse realized this description in a supreme degree; this is a perfect picture of the horse of Merlerault, with his long supple neck, his fine head, the carriage of his tail giving him the mark of highest elegance; his trot was perhaps a trifle short, but at the gallop he extended himself with the suppleness of an Arab.

"There are unfortunately, men who think it necessary to destroy under pretext of improving. In short, by crossing and recrossing, the horse of Merlerault has become weakened until he was destroyed. Let this sorry example be forever a lesson to our breeders."

How familiar all this sounds to American breeders! Attempts at *improvement* brought the old Morgan, the best and most typical American horse, indeed the only truly American horse we ever had, to the edge of extinction. Happily the Morgan Horse Club has intervened before it was quite too late, and there is hope for the saving of that good old race!

The other light horses typical of France are the Camargne and Tarbes families. These are products of the south of France, the sea alone separating their country from the home of the Arab and Barb.

They came to France with the Saracens, and staid. Marseilles, really a part of the Orient—Barbarossa, commander of the Turkish fleet of Sultan Solyman II spent the winter of 1541 at Marseilles, with 180 galleys and 10,000 men—Marseilles gave to France in the Camargne little horse which have preserved many of the valuable qualities of the Arabs left there by the Saracens when they were driven out. These degenerated somewhat, when left to themselves. From that place they spread over the south of France, and one sees their descendants from Herault on one side to the gates of Nice on the other. In 1775 a stud of these was established which produced animals thought fit to be placed in the Royal stables.

The average height of these horses was from 144 cm. to 152 cm. (14 hands $\frac{1}{2}$ in., to 14—3 $\frac{1}{2}$).

"These horses," writes the Baron de Vaux, "are strong, gentle, yet full of fire. They are reared in full liberty of nature, on an arid soil where is much salt grass, which makes them agile,

strong, and able to bear short rations and great changes of temperature; they are capable like the horses of the Orient of going 100 kilometers (60 to 65 miles) on a single days journey."

It is said that the cross of a Barb stallion on a Camargne mare produces a most excellent cavalry mount. Sanson the eminent naturalist and student of hippology, declares that in using Arab or Barb stallions with Camargne or Tarbes mares, there is really a regeneration of type by reinfusion of the original pure blood.

The Tarbes horses are cousins of those of Camargne, also of Asiatic descent, and a trifle larger.

The regenerating influence in all the French breeding studs is composed of pure English thoroughbred stallions, pure bred Arabs, and pure Anglo-Arabs. These last are a mixture of English thoroughbred and Arab blood, either in equal portions of each, or one or the other of the pure bred strains given a predominant part.

In 1906 these stallions numbered 565, all recognized as pure bred, of which the Anglo-Arabs were 228, the thoroughbreds 238, the pure Arabs 104, such being the report of the Directeur General des Haras for 1907.

Speaking of this combination of Arab and thoroughbred blood, the report of 1909 declares: "The Anglo-Arab is a special product of France, as is the Anglo-Norman, and the center of its production is the southwest. It makes a marvelous horse for the army, full of energy, supple, of distinguished appearance, enduring, and is found by the officers of the remount service mostly in the neighborhood of Pan and Tarbes."

Something must be allowed for gallic enthusiasm, in the claim that the Anglo-Arab is a special product of France. The same horse is called a *Gidran* in Hungary, is the standard cavalry horse of the Austro-Hungarian empire, and is turned out in great numbers from the great Hungarian breeding stud of Mezohegyes.

That he is appreciated in France need occasion no wonder. The introduction to the report of the jury of the International Exhibition held at Paris in 1910, declares:

"The pure-bred Anglo-Arab justly figures in our stud book as thoroughbred, has a special class assigned him in our

Horse Shows, and is recipient of 160,000 francs of public money annually, as purses at the race tracks and special prizes at Horse shows. In the annual purchases of the Commission des Haras, held at Joulouse in October, prices paid for young stallions ran from 5,000 to 12,000 francs."

The amounts at command of the Administration des Haras in France, would seem extravagant if suggested to the Appropriation Committees of the Congress of the United States. In 1908 M. Fernand David asked for eight million francs, in addition to the Government interest in the "pari-mutuel," the betting proceeds at the public race tracks, an interest amounting to three million six hundred thousands francs in 1906.

The *Journal Official* of 1907 showed that the total funds at the disposal of the Administration des Haras amounted to twelve millions of francs. Besides this large sum they could direct the expinditure of sixteen millions more, a total of twenty-eight millions of francs devoted to horse breeding annually in France. In view of the great size of this fund of public money, expenditures for draft horse breeds have since then been taken from the control of the Administration des Haras.

The figures mentioned do not take into account expenditures for horse breeding in the French colonies.

According to M. H. Lecoq, Inspector of Agriculture for Algeria, there are no less than 4, 500,000 horses in that country, mostly of Barb or Arab blood. In 1906 the Government had 800 Barb and Arab stallions on circuit in Algeria, and 147 in Tunis.

Add to these the Government horses in the French Sudan, Madagascar, Indo-China, New Caledonia, and it becomes very apparent that the Republique Francaise is thoroughly impressed with the importance of maintaining an adequate horse supply as part of the scheme of National defense.

HUNGARIAN HORSE BREEDING.

Baron Jules Podmaniczky, of the Bureau of Horse Breeding in the Royal Hungarian Ministry of Agriculture, at Budapest, has just issued (March, 1913) a most interesting report, entitled "The Present State of Horse Breeding in Hungary." It contains valuable lessons for Americans, especially in view of the present state of anxiety among our army officers over the questions of remounts for our cavalry.

It appears that at the time of the last census, in 1911, Hungary—not including Croatia—had 2,023,711 horses, or 7.1 for each sq. kilometer in the country. Germany alone had more, with 8, England had 6.4, France 6, Russia 4.5, Italy 3.3. In proportion to population Hungary was far ahead of all others, with 110 for each 1000 inhabitants, Germany 67, Austria 63. In 1911 Hungary had in the stud 9,326 stallions, and 919,670 brood mares.

The experience of Hungary is that the increase in horses is always coincident with extensive exports. Thus, in 1911, there were sold out of the country 65,511 animals. Yet the increase since the last previous census was 28,499, and Baron Podmaniczky remarks: "The more horses sold abroad the more a country produces, and they are constantly improving in quality."

The Hungarian Ministry of Agriculture encourages the breeding of different kinds of horses, each in that part of the country where experience has proven the environment best adapted to any particular breed. English thoroughbreds are located in the rolling country near the Danube, which is not too hilly. In the more sandy and less fertile regions, Arab blood predominates. In the mountainous regions of the Carpathians are the Lippizans, originally from the Karst highlands of Austria. Finally, on the borders of Austria and Croatia, heavy draft horses fit in best with the animals of that country.

The control of this entire system of breeding is centralized at the Ministry of Agriculture, and exercised by a special section of the Ministry, which directs and administers all the personnel as well as the material of horse breeding (the Government breeding studs and all the stallion depots), and in general everything that relates to the breeding of horses in Hungary.

The entire scheme is subject to military discipline. Indeed they are considered part of the National Defence (Hoaved). The instruments for control of horse breeding, consist in the following:

1.—The Government breeding studs, Kisher, Babolna, Fogaras, Mezohegyes.

2.—The four great stallion depots.

3.—The purchase of mature stallions by the Government. Every year, in June, breeders are invited to report any stallions between three and eight years of age they have for sale. These are examined, and such as are found desirable are purchased by the Government. Besides this, a sale of stallions is held at Budapest every autumn, where the Government purchases thoroughbred stallions that have been raced through the season.

4.—To help supply the Government stallion depots, arrangements are made with proprietors of private breeding studs, whereby they agree to sell to the State, at an agreed price, three year old stallions produced in their studs, after examination has proven them of satisfactory quality. This price is fixed at a figure based on the value of the horse population of the stud.

5.—The Government buys, especially in communities where the quality of stallions used is high, about 350 yearling horse colts, annually, from breeders. These are taken to the Palanka Colt Farm, and carefully raised till three years old. They are then sold to communities through the country at moderate prices, with the reservation that said communities must agree to keep them for stud service a certain number of years.

6.—Stallions removed from the Government depots each year, either because of age or replacement by fresh stallions, are sold on the spot at moderate prices to horse breeders.

7.—Surplus brood mares from the Government studs are sold by auction to proprietors who can show their qualifications as horse breeders.

8.—The Government offers purses each year for races organized through the country.

9.—The Government gives material aid to Horse Shows, in the form of prizes and diplomas.

10.—Since certain communities have been forced by agricultural conditions to circumscribe the area of their pastures, the Government gives annual assistance to such communities or associations, establishing and maintaining commercial grazing lands, to the end that colts may have systematic rearing.

11.—The Government subsidizes Racing Associations.

12.—Finally, (a) The studs on State properties, (b) studs belonging to individuals, (c) breeding in general by the whole people, and receiving vital force from the two preceding sources, so producing great numbers of the superior horses in Hungary—all are under the national control and direction of the Section of Horse Breeding in the Ministry of Agriculture.

The State Breeding Studs.

These great establishments are for the production of the highest type of stallions for use of the breeders of the country. The system has not been allowed to vary for many years from the line of action established at the beginning. In each of the National breeding studs great care is given that the brood mares are submitted to conscientious tests. These are made in three ways: (a) Young mares are tried before being bred, in the special manner characteristic of their breed, under saddle; (b) They are tried in harness, followed by races in harness, organized at the breeding studs; (c) A certain number are loaned to hunt clubs, where they are tried for a season of hunting. Others are sent each year to military riding schools, and after training they follow the routine of that institution through a hunting season.

Young stallions of three and one-half years taken into the Government studs and distributed in the stallion depots are not submitted immediately to such tests, in view of their age, but after the age of five years they take their tests also, either with a Hunt Club, or in a military riding school.

All these tests are followed to the end that no horse shall be kept for breeding purposes but such as have proven their desirable qualities.

Kisber.

This stud was established in 1853, on a domain of the same name belonging to the Government. From the beginning it has been devoted to breeding English thoroughbreds. At first its breeding stock came from the other Royal studs, Babolna and Mezohegyes. In 1854 seven mares and six stallions were brought from England. In 1860 a training stable and track were established, to try out young stock by public races. This public race track was suppressed in 1867, and since that time yearlings are sold by auction, the purchaser agreeing that none shall be resold to go abroad, excepting by special permit from the Minister of Agriculture. In 1865 the great horse Bucaneer was bought, foaled in 1857. He was in the stud at Kisber for twenty-one years. Nine of his offspring won the Austrian Derby, among them the celebrated horse Kisber, who also won the English Derby, and the Grand Prix de Paris, in 1876. In 1872, Cambuscan, son of Newminister, came from England. He proved his value by his offspring, among them the unbeaten mare Kincsem, the most celebrated race horse ever bred in Hungary. Of more recent importations were Bona Vista, a remarkably good horse, and later still Adam, for which \$60,000 was paid. There are now at Kisber 201 thoroughbred English mares, its total population is 694 horses, young and old. Private breeders send, annually, 250 to 300 mares to the stallions at Kisber.

Babolna.

This stud, started in 1790, is devoted to the breeding of pure bred and half-bred Arabs. To maintain the purity of its stock, and also to freshen its blood from time to time, this stud procures, when possible, new importations of stock from the Orient. Such animals were added in 1836, 1843, 1852, 1876, 1897 and 1901. The position occupied by the stud of Babolna in the scheme of National horse breeding, is considered of the highest importance, the excellent qualities of Hungarian horses being attributed principally to the Arabian blood in their veins. The larger stallions bred at Babolna are distributed in the more level parts of the country, those furthest advanced in culti-

vation, whereas the smaller ones are more used in the mountainous regions.

At the Paris Horse Show of 1900, it was an Arab horse from Babolna, Koheilau, that won the Grand Championship. Service is made at present time at Babolna, by four pure bred Arab stallions imported from the Orient, two pure bred raised at Babolna, and six half-bred stallions of Arab blood. Mares owned by private individuals are admitted to the use of Babolna stallions, and there are at present belonging to the stud forty-five pure bred and one hundred and thirty-seven half-bred Arab mares, 182 altogether. The total horse population of Babolna is 732.

Mezohegyes.

This great stud, organized in 1785, had in the beginning 172 Circassian mares, 148 Holstein, 177 Moldavian. Since that time it has undergone many changes, but its stock has always been robust, big boned, well built. These characteristic qualities, quite exceptional indeed, are largely due to the particularly favorable influence of the soil of Mezohegyes. Thanks to this circumstance a family of Anglo-Norman horses has been established at this stud, which, under the names Grand Nonius and Petit Nonius has added glory to the National scheme of breeding in Hungary. Four stallions, especially, have had great influence in establishing the line of horse breeding in Mezohegyes. In 1816 ten stallions were brought from the stud of Rosières (France) taken therefrom by troops returning to Hungary. Among them was Orion, an English thoroughbred foaled in 1810, who was the sire of Nonius. The dam of that horse was a Norman mare, and he was progenitor of the strain of horses still produced at Mezohegyes. Nonius reached an exceptional age, and did service in the stud for twenty-two years. The second stallion of importance in the stud was Furioso, an English thoroughbred bought in 1871 from the stud of Count George Karolyi. The third was North Star, a thoroughbred brought from England in 1852. The last two horses were the progenitors of the half-breds called Furioso and North Star in the present day. The fourth great name at Mezohegyes was Gidran I, and Arab stallion, founder of the race of Gidrans now so highly prized in Hungary.

At present the stud of Mezohegyes is divided into five groups, as follows: 1. The English half-breds of the stud, descendants of Furioso and North Star; 2. The Gidrans, all chestnuts; 3. Grand Nonius and Petit Nonius, divided in the stud according to height. In this part of the stud English thoroughbred blood has been used from time to time, besides the stallions raised in the stud itself. This section may indeed be considered half-bred English horses. 5. Lippizans, a race whose mares have now mostly been removed to Fogaras.

The chief production of Mezohegyes in importance is the Nonius family. The stallions of that race are very robust and pleasing in appearance. Horses of this family are universally appreciated and preferred above all others for use in heavy harness and agricultural work. The Lippizans were originally brought to Mezohegyes for the developing influence of the soil of that domain, to increase the size of the stallions. The experiment was not altogether satisfactory, and they have now nearly all been taken to Fogaras. The animals now at Mezohegyes, are as follows:

Stallions: Five English thoroughbreds, three Anglo-Arabs for breeding Gidrans, two Furioso for half-bred English strain, six Nonius, three Lippizans, total sixteen stallions. There are of brood mares, 142 English half-breds, 100 Gidrans, 141 Grand Nonius, 139 Petit Nonius, twenty-four Lippizans, total 546 brood mares. The entire horse population of Mezohegyes is 2,100 head.

Fogaras.

The stud of this name was established in 1872. Its object is to procure stallions of the Lippizan breed, hardy, of good bone, light movement, such as is best adopted for mountainous countries. The stud has been reinforced from time to time by new acquisitions from original sources. The present strength of the stud is made up of descendants of the strains of Favory, Maestoso, Napolitano, Peuto, Conversano and Incitato. The annual production of the stud is pastured on the high mountain sides. Eight stallions of the breed are now in service, and there are at Fogaras fifty-three mares. The total of horses at Fogaras is 332. In the four great Government studs there are 982 brood mares.

Mares young or old, culled from the four studs not the most desirable but free from hereditary unsoundness, are sold by auction, as already stated; but it must not be forgotten that only qualified breeders are permitted to attend these auctions. Other disposable stock are sold at Budapest each year. Stallions from the Government studs are distributed at three and one-half years of age among the stallion depots, whence they return to the remount stations at four years.

Hungarian Stallion Depots.

The Government has four Stallion Depots, divided into eighteen sections. At the head of each depot, also of each section, is a commandant whose attention covers the entire district. Each of these sections comprises a considerable number of villages or cities. Each of these decides the location of a service station for stallions, also the number and breed of the stallions for each assignment.

The service fee in the stations is not always the same but varies from two crowns to sixteen (\$0.40 cents to \$3.20) according to the quality of the stallions used, and the material condition of the region. Certain stallions also are rented for the season to private breeders at an agreed price, this in some instances allowing his retention for a whole year. The number of mares he shall serve is limited to forty-five.

Draft horses needed for use in the parts of the country where such are required, are taken from the neighborhood administered from Kisber, or from importations, especially from Belgium. In the future distributions of draft horses such will be exclusively of the Belgian breed.

The four stallion depots, are at Szévesfehérvár, Nagykörös, Debreczen, Sepsiszentgyörgy. At these four, in 1912, there were:

(a) In 871 Breeding stations.....	3021 stallions.
(b) Located with individuals.....	225 "
(c) Rented to private studs.....	142 "
Total.....	3388 "

The stallions from these four stations covered in 1912, 141,980 mares, an average of forty-seven for each.

Of these 3,388 stallions, 380 were bred at Kisber, 343 at Babolna, 1,026 at Mezohegyes, 158 at Fogaras. In the year 1912 there were bought 1,258 mature stallions and 223 yearlings.

Outside each of the four great breeding studs, is a domain in the neighborhood, where horse breeding is under the direction of the stud management. In these domains (list omitted) there were located in 1912, thirty-one stallions, 446 brood mares, 1,898 of all ages. The mares of these six "domains" excepting those at Kolozo, are used in farming operations.

Private Studs.

These play an important part in the country's scheme of horse breeding. There are about 420 private studs in Hungary, in which are 13,000 brood mares. Of these, 59 breed English thoroughbreds, 337 English half-breds, 32 Arabs, 13 Nonius, and Anglo-Normans, 12 Trotter, 22 Lippizans, 19 heavy draft horses, Belgian or Percheron. Of stallions in these studs there are 210 English thoroughbreds, 168 English half-breds, 17 Arabs, 24 Nonius, 23 Trotters, 18 Lippizans and 18 draft horses.

In General.

Horse breeding has undergone important changes of late, not only by reason of the regrettable diminution of pasture lands, owing to the growing intensity of agricultural methods, these employing much machinery and so demanding an increase of heavier breeds of horses.

To oppose an obstacle to the undue increase of cold blood, breeding of this type of horses has been limited by organizing the region where they may be produced; outside this section the employ of cold blood stallions for public service is absolutely prohibited. The only exceptions to this rule is made in favor of certain breeding associations which specialize in breeding certain families of heavy draft animals.

The ends always kept in view by the Hungarian Administration of horse breeding, are (1) to make horse breeding not only useful but lucrative; (2) to put at the disposition of the farmers, such number of draft animals as are needed for cultivating the soil; and, (3) to secure for the army an adequate supply of good horses.

Finally there should be mentioned the activities of an association of private breeders in the neighborhood of Mezo-hegyes, who breed large horses of the general type of the Nonius family, suitable for harness purposes. This association, in 1912, maintained ten stallion stations, where 120 stallions covered 4,916 brood mares belonging to 2,819 private owners, an average of forty-one for each stallion. In consideration of the excellent quality of horses produced by this association, the Minister of Agriculture gives every encouragement, and contributes material help to their efforts.

Besides the foregoing control and encouragement to horse-breeding given by the Government, appropriations from the Treasury are made to numerous race meetings through the country, not only running races, but also trotting and steeple-chases.

SOME EXPERIENCE WITH ARAB HORSES.

BY CAPTAIN FRANK TOMPKINS, TENTH U. S. CAVALRY.

DURING my service as a cavalry officer, covering a period of twenty-two years, I have been deeply interested in the ability of different types of horses to cover long distances under service conditions.

In 1908 in Cuba, I made a march with my troop, of one hundred and twenty-seven miles in a little less than thirty hours, including all halts. I noticed that the small, compactly built horses of about 15 hands stood this test better than the taller horse of the troop, those over 15.2.

Since I have been on duty as Professor of Military Science and Tactics at Norwich University, Northfield, Vermont, I have had an opportunity to study the Morgan horse and the Arabian horse, and the more I see of these horses the more convinced I am that they are what we need in the cavalry service. As you probably know the Morgan horse is descended from the Arabian. They have many similar characteristics.

On October 30, 1912, I rode to Fort Ethan Allen, Vermont, and return, a total distance of one hundred and two miles. The trip was made in five minutes less than twenty hours, including all halts. The halts aggregated four hours and thirty minutes—this made the actual riding amount to fifteen hours and thirty minutes, or very nearly seven miles an hour.

I was accompanied on this trip by Cadet R. C. Kimball of the Junior Class, who rode a Morgan gelding, the property of Norwich University; six years old, fifteen hands, weight about 975 pounds; sired by Prince Charley. I rode the pure bred Arabian stallion Razzia, owned by Colonel Spencer Borden of Fall River, Massachusetts. Razzia was foaled in 1907, he is 14.2, and weighs about 950 pounds. Razzia's dam is Antika, his sire Harb, son of Bint Helwa. Razzia is an Abeyeh Sherakieh.

Going, we covered the fifty-one miles in eight and one-half hours, including a halt of one hour and thirty minutes on the road, making the actual marching time seven hours, or an average of a little over seven miles an hour. Returning, we covered the fifty-one miles in nine hours and thirty minutes, and halted one hour on the road, making the marching time eight hours and thirty minutes, or one hour and thirty minutes longer coming back than going up. This longer time was due to darkness and stormy weather, making it unsafe to travel faster than a walk in many places.

We left the Norwich University Stables at 3:35 A. M., and arrived at Waterbury, a distance of twenty-three miles by road at 6:45 A. M. I had planned to leave the stable at midnight and my hostler had groomed the horse and saddled him before this hour but my arrangements for being called failed me and I did not appear until 3:35. The stable being lighted during all this time and the horse being saddled, deprived him of the rest that he otherwise would have had were he not disturbed until time for departure.

The sky was overcast but enough light from the moon filtered through to make the road visible but it was not sufficiently light to distinguish objects on the road such as depressions and stones. When about half way to Waterbury a heavy rain storm soaked the riders and horses. At Waterbury the horses were fed three quarts of oats. We left Waterbury at 8:15 A. M., and arrived at Ethan Allen at 12:05, noon.

We dismounted in front of the Administration building and were immediately surrounded by officers of the Tenth Cavalry who were much interested in the march made by these little horses, and were greatly surprised to learn that the same little horses were to make the return trip that day. At this time the horses showed no signs of weariness. Contrary to my custom I turned the horses over to a Tenth Cavalry soldier with instructions to water them, feed them two quarts of oats, and rub them down carefully. I have reason to believe that my instructions were not obeyed and that the horses were neither watered or fed at this time.

When fifteen miles from Fort Ethan Allen we encountered a very heavy wind blowing clouds of dust, making riding exceedingly disagreeable for both men and horses.

I took my annual physical examination at Fort Ethan Allen, ate a hearty luncheon, and started on the return trip at 2:00 o'clock. At 5:00 o'clock it got very dark, so much so that we had to slow down and walk in many places where we would otherwise have taken a trot. We arrived at Waterbury, twenty-eight miles from Ethan Allen at half past six. I had the horses watered and fed hay, all they would eat in the hour's rest. We left Waterbury at 7:30 and arrived at the Norwich University stables, a distance of twenty-three miles, at 11:00 P. M., with the horses coming strong and up on the bit all the way. As soon as they recognized their home territory it was necessary to hold them in.

I watched the horses that night and could detect no signs of weariness. They moved with a springy movement, head and tail up. The next morning I also examined these horses and they were ready to go on with a day's march. There was no swelling or stiffness of any description.

Neither of these horses were prepared for this test, in fact they were both somewhat soft. The test was made on the spur of the moment and as I have said before, without any preparation. When I started it I did not think it possible for either horse to cover the one hundred and two miles in the time stated, with so little preparation.

Again I found it necessary to go to Fort Ethan Allen and bring down a couple of Arabian horses, the property of Colonel Borden, to this University. This was on the 19th of March, 1913. The two Arabians were Halcyon, sired by Hail, he by Hagar; her dam Heiress, sired by the famous Maidan. And Halin, a bay stallion foaled in 1906, his dam Hilmyeh, she a daughter of Bint Helwa. Halim's sire Astraed, a son of the Queen of Sheba and Mesaoud. Halim is of the Seglawi Jedran of Ibn Sudan's strain. Halcyon is a chestnut mare, lightly but very prettily made, standing 15.1 and weighing about 900 pound Halim stands 14.3 and weighs something over 1,000 pounds.

I took Cadet Kimball with me. He rode Halcyon and I rode Halim. We left Fort Ethan Allen March 19, 1913, at 8:05 A.M. Both horses were very soft, having been exercised but little during the past nine months. In places the roads were heavy as they always are at this season of the year with the

frost coming out of the ground. In places the river had overflowed the roads a few days previous leaving them blocked with heavy cakes of ice piled up to a height of six and ten feet all of which had to be cleared by gangs of workmen. We passed through a lane of this ice continuing for nearly a mile. The south exit to this tunnel had been blasted out by dynamite a few minutes before we got there, our horses being the first to pass through. In other places the road was covered with smooth ice making the going very slow and dangerous. We were forced to make a detour of three miles to avoid a bad piece of road. This made the total distance traveled a long fifty-five miles. The total time in making this ride, including all halts, was nine hours and twenty minutes, which is a remarkable performance for horses that have had practically no exercise during the past nine months, and over roads as difficult as those I have just described.

The horses were caked with mud from their ears to their fetlocks. The day was unusually warm for this season of the year causing the horses to sweat before they had been a hundred yards on the road. This in itself must have been a severe handicap as the sudden rise of temperature in the early spring has a tendency to lower ones vitality, causing a decidedly lazy springlike feeling totally different from the invigorating effect of the days of early October. These horses were normal next day, and have been ever since.

A year ago Major George L. Byram rode this same horse Halim from Providence, R. I., to Fall River, Mass. The Major, with his equipment, caused the horse to carry a total weight of two hundred pounds. The total distance traveled was twenty-six miles, six of these miles at a walk over paved streets. He walked the first two and seven-eighths miles over paved streets in twenty-five minutes; the twenty miles from there to Fall River bridge the horse covered in one hour and fifty-five minutes. At the bridge he lost a shoe and had to be pulled to a walk for three miles. When he recognized the neighborhood of his home he could not be restrained covering the three and one-eighth miles in thirty-five minutes; making the twenty-six miles just inside three hours—six miles at a walk.

Halim has now gone to Arizona with Lieutenant Winfree, 9th Cavalry, for a campaign test in actual service.

One more test of horses from the same stud has been reported to me by the owner.

Shahzamin, ch. s. six yrs., Sire Kahled (Sire of Major Barrett's Artillery) dam Imp. Shabaka (dam of Segario and Sinbad) was shown at the Charity Fair of the Park Riding School in Boston, with the b. m. Imp. Nessa eight yrs., whose Sire was Huaran, son of Hagar; Nessa's dam the famous mare Raschida.

Their class was called at ten o'clock P. M., Saturday April 19, 1913. Sunday morning at 6:15 they started over the road for their home, fifty-three miles distant. The first thirty-five miles were covered in exactly five hours, without hurrying. Rested and fed, they made the remaining eighteen miles in two hours and forty-five minutes, covering the last mile in six minutes. The stallion is a much faster walker than the mare, and could have considerably reduced the time, but had to be restrained to keep her company.

These experiments have convinced me that the Arab horse is the horse for the cavalry service. The hard service peculiar to cavalry in active campaign requires a horse low on his legs, of strong bone, full form, a horse that when even in thin flesh does not show it, one whose muscular development, energy and reserve power are denoted by a certain balance and uniformity not often seen in horses above 15.2. The Arab and Morgan horses are easier kept than the horse over 15.2; they can therefore do more service on short rations than their larger brother, and in active service during the midst of a strenuous campaign they will be up and doing when the type of horses our officers are now exhibiting in the Horse Shows, will be down and out.

NOTES ON THE INTERVENTION IN MEXICO, 1861-7.

BY BRIGADIER GENERAL JAMES PARKER, U. S. A.

IN the year 1861, in consequence of a long series of disorders, Mexico had defaulted in her public debt. As a result of a convention between Great Britain, France and Spain, intervention was decided upon, and a force of troops and marines of the three nations was dispatched to Vera Cruz.

Owing to differences of opinion among the allies, France took upon herself the entire task, the other nations withdrawing their troops. A full account of this expedition is given in a book, entitled "*Expédition du Mexique, 1861-1867, Recit Politique et Militaire*, par G. Noix, Capitaine d'État Major." In writing this account, Captain Noix has had access to the best sources of information, as well as to the archives of the French Government, and the Ministry of War.

In best informed military circles, the Mexican Expedition was regarded as being due to the desire of Napoleon III to augment his prestige, and that of his dynasty, by sustaining the Catholic Church, which at that time, had suffered much loss of property in Mexico, as a result of the policy of President Juarez. This was more probably correct than the idea, that the invasion of Mexico had, for its principal object, the establishment of a monarchical form of government. This action of the Emperor of France was opposed, not only by the United States, but by the sentiment of a large majority of the French people.

In 1861, the railroad from Vera Cruz to Mexico City had been commenced, but was finished for a few miles only, as far as La Tejeria. The French had been convinced by their friends in Mexico, that only a very small force would be necessary, and that large numbers of Mexicans would join them, as allies, to fight under their banner. As a consequence, the first ex-

pedition was composed of seventy-three hundred (7,300) men only. It was commanded by General de Lorencez.*

These troops, on arrival at Vera Cruz, were forwarded in detachments to Córdoba, at the foot of the ascent which leads to the Plateau of Anahuac. The objective of the French troops in marching from Cordova, was first, Orizaba, next, Puebla, and next, Mexico City. The effective of this marching force was about 6,000 men.

Marching from Orizaba, April 27, 1862, the French Army reached the Cumbres of Acultzingo, being a pass leading upon the plateau on which Puebla and Mexico City are situated. In this strong position the Mexican General Zaragossa attacked them, having about 4,000 men. After a three hour fight, the Mexicans were driven off with considerable loss.

On May 5, 1862, the French Army, arrived in front of Puebla, defended by General Zaragossa with 12,000 men.

Puebla was then a city without walls, regularly constructed, largely built of stone or adobe, streets barricaded, and walls of the houses and convents pierced for rifle fire. The various houses of each block thus formed a kind of square fortress connected by covered ways. The enemy had formed, in the center of the town, a large redoubt heavily armed. The city was commanded on the northeast by the Cerro Guadalupe 300 feet high, on which was a fortified convent. This ridge extended toward the west, where there was a little square masonry fort called Loreto.

Having reconnoitered the place for one hour and a half, only, General Lorencez, against the advice of his Mexican allies, determined to attack the heights, and put his design into execution at once. The force of the French was about 6,000, consisting of three regiments and two brigades of infantry, one squadron of cavalry, two batteries of artillery, and one battery of mountain artillery, and one company of engineers. After an hour and a quarter of cannonading the signal for assault was given, but the French, arriving at the convent on the heights, were unable to cross the ditch by which it was surrounded, and were driven back, losing 476 men killed and wounded.

* It is possible too that the French thought they could accomplish with 7,000 men what the Americans in 1846 did with 1,000 men.

The news of this victory, known as the "Cinco de Mayo victory," was received with great joy by the Mexicans, elated greatly the supporters of Jaurez, and correspondingly depress the ardor of those who favored the French. The French Army was unable to maintain itself in front of Puebla, and retreated back to Orizaba, where it was joined later by Mexican allies to the number of 2,500 horsemen under General Marques. Arrived at Orizaba the troops were cantoned there and at Cordoba, and it became necessary to establish communication with and obtain supplies from Vera Cruz until reinforcements could be forwarded. For, while it is quite possible, in Mexico, to subsist a large foreign army on the interior plateau, the country between the edge of the plateau and Vera Cruz, contains very little cultivated land. This task was made more difficult by the ravages of sickness and yellow fever among the troops which had been left at Vera Cruz, and on the line of communication between Vera Cruz and Orizaba. The French line of communication had to suffer the attacks of numerous parties of guerrillas who very seldom gave quarter when successful.

On the 13th of June, 1862, took place the combat of Cerro Benego, remarkable in some aspects. This mountain rising about 1,000 feet above Orizaba, was thought to be inaccessible to the enemy, and therefore was not occupied by the French outposts. At ten o'clock in the evening, noise being heard in the mountain, a French company of infantry was ordered up to reconnoiter. Arriving in contact with the enemy, fire was opened. The Mexicans were 2,000 men strong with a reserve 4,000 strong. The French being ignorant, in the darkness, of the number of the enemy, held their ground, while the Mexicans, for the same reason, were afraid to advance. After several hours another company of French infantry arrived, as reinforcements. The French, making a determined attack drove the Mexicans from the heights, the Mexicans losing 250 killed and wounded, 200 prisoners, three mountain guns, and a number of flags. The whole Mexican Division, comprising 6,000 men fled in disorder. The French engaged numbered 140 men, and lost 34 killed and wounded.

On the 9th of September, 1862, the French advanced troops having suffered much privation for want of food and supplies, the second French expedition began to arrive under General Forey. This reinforcement raised the strength of the French up to about 30,000 men, the army being now organized into four brigades of infantry, and one brigade of cavalry. There was included, two batteries of Field Artillery, one battery of mountain guns, two of siege artillery, making fifty guns in all, and including 19,000 infantry, and 1,500 cavalry.

In his instruction to General Forey, Napoleon III said:

"It is not our wish to impose upon the Mexicans a form of government to which they will object, but it is rather to help them in their efforts to establish a stable government. Nevertheless, if the Mexicans prefer a monarchy, it is in our interest to help them, and in this case you may nominate Arch Duke Maximilian as our candidate. We are interested in having the Republic of the United States of America powerful and prosperous, but we do not wish her to take possession of the Gulf of Mexico, and dominate the Western Hemisphere. *If Mexico should acquire a stable government under our protection, we will have interposed between the United States, and countries to the south of her, a barrier which cannot be crossed.*" The Emperor Napoleon insisted in believing that the large majority of Mexicans were supporting his cause.

On October 27, 1862, General Berthier, with 5,400 men was sent from Vera Cruz toward Jalapa, on the road to Mexico taken by the Americans in the year 1846. The various defensive positions along this road had been occupied by the enemy. The first of these positions, Puente Nacional, was taken without resistance. At Rinconada the French and Mexican cavalry had an engagement, fifteen Mexicans being killed.

At Cerro Gordo the Mexicans had a force of 3,000 men and some artillery, but two companies of French infantry, having turned the position, the enemy abandoned it. Jalapa was taken without resistance.

In December, 1862, the French sent an expedition to Tampico. It was taken without trouble, but it was found that the occupation was so difficult that the French later evacuated it. Later in the war, it was again occupied. No particular advantage resulted from the occupation.

At this time the Mexican allies of the French consisted of 13,000 infantry, 1,100 cavalry and 50 artillery. The French and Mexican soldiers did not show much liking for each other. Nevertheless the Mexican cavalry was of much service.

On the 18th of February, 1863, at San Jose, two platoons of French cavalry, forming an advance guard, became engaged with 500 Regular Mexican cavalry. Although their numbers were as one to six, they did not hesitate to charge them, and finally ran against a company of entrenched infantry. The French drove the enemy back, and pursued him ten miles. The French lost three, the Mexicans thirty-nine killed and wounded. This shows good work with the sword.

In February, 1863, the French army, now numbering over 30,000 men, again took up the march on Puebla, and at once the difficulties as to the supply of the army disappeared. "Supplies found on the plateau," says the author, "sufficed for the daily consumption, permitting the commanding general to maintain on hand a reserve, in wagons, of twenty days food." Puebla was invested on the 16th of March, 1863, the city having been much more strongly fortified since the year before. It was surrounded by eight forts and many smaller works. The siege of this town reminds one of the siege of Zaragossa in Spain, in 1808, in that the fighting after the city was entered was of the fiercest description, from house to house, using the mine, the pick, the shovel, the French forcing their way from one quadrangle to another in spite of fierce resistance.

On April 7, 1863, the French had made so little progress, that a council of war was held to determine whether to wait for more artillery or whether to abandon the investment of Puebla and march on Mexico City. The Commanding General resolved to maintain the siege. At that time the French had had about 540 killed and wounded. In this connection, it may well be asked whether, instead of attacking Puebla, the French might not have better marched on Mexico, thus drawing the enemy out of their fortifications and forcing the fighting in the open.*

* It has been claimed, that, during the war of 1846, General Scott would have done better had he turned such positions as Chiribusco, Molino del Rey, and Chapultapec, instead of taking them by assault.

On April 25, 1863, the French after a long bombardment made an assault on the convent of Santa Inez, and after great heroism, were repulsed losing 330 men, of whom 130 were captured by the Mexicans. After this assault, the French concluded to invest the place without further attacks. On the 8th of May a large Mexican force, from Mexico City, made an attempt to introduce a convoy of supplies into the place. They were attacked and beaten back in several combats in which the Mexicans lost about 1,000 prisoners and 800 killed and wounded. On the 17th of May, the Mexicans, running out of supplies, and, despairing of being able to withstand the siege, surrendered, to the number of about 13,000. The loss to the French in the siege was about 1,300 killed and wounded.

On the 10th of June, 1863, the French Army, under General Forey, entered the City of Mexico without resistance. By a decree of the 18th of June General Forey designated thirty-five citizens to form an "Assembly of Notables" of two hundred and fifteen members, elected or chosen, by them. On the 18th of July, 1863, the "Assembly of Notables" presented a report recommending that the country adopt a monarchical form of Government, and that the Imperial Crown be offered to the Archduke Maximilian of Austria. A number of minor combats took place about this time.

The end of the summer of 1863 found the French Army was master of Mexico City, of Puebla, and the country for sixty miles around these cities. Its detachments occupied the line from Mexico City to Vera Cruz. The coast of Mexico was blockaded. In the different localities visited by the troops, the population appeared rather sympathetic than hostile. They often asked for protection by French garrisons, to escape the guerrillas, but beyond that point the French received very little assistance. Juarez was still the recognized chief of all the country, not occupied by the French. The French from this on, obtained food supplies from the country, equipments and munitions of war from France.

The government of Mexico as organized by General Forey was sadly in need of funds. The Mexican allies were lacking in enthusiasm. The enemy, on the contrary, showed great energy.

They dominated the country by terror, they recruited their forces everywhere, even in the cities occupied by the French.

About this time, dispatches were received by General Forey, which indicated that the Emperor Napoleon was disagreeably surprised by the news that the monarchy had been proclaimed, and by the manner in which it was effected, and that he hardly considered the voice of the "Assembly of Notables" sufficient guaranty of the will of the people of Mexico.

Later, General Forey was relieved of command and General Bazaine appointed in his place. General Bazaine showed great energy. He had, then under his command 42,000 armed men, not counting the allies, the army being in fine condition. The Mexican allies numbered about 13,000 men. In the fall and winter of 1863, and spring of 1864, Bazaine organized numerous expeditions which, without much resistance, occupied the country generally within one hundred miles of Mexico City.

On the 10th of April, 1864, Archduke Maximilian received a commission of Mexican Deputies, at Miramar, Austria, and announced that, being assured that he was the choice of the Mexican people, he accepted the crown. He embarked on the 14th of April, 1864, and arrived at Vera Cruz, on the 28th of May. After an enthusiastic reception in the towns through which he passed, he arrived at the City of Mexico on June 12, 1864. His role as Emperor, however, was complicated by the lack of Government funds, and by the unreasonable demands of the officials of the Catholic Church. And while the French Army had succeeded in driving the forces of Juarez to points far distant from the City of Mexico, the opposition to the monarchical government continued, being largely fostered by aid given by the United States Government. President Lincoln wrote to Juarez: "We are not in open war with France, but you can count on us for money, cannon, and on our favoring voluntary enrollments of our citizens in your army." On the 4th of September, 1864, the House of Representatives of the United States, unanimously voted for a resolution against recognition of the monarchy in Mexico. To Juarez the problem was, therefore, to resist and live until the triumph of the Union was assured, when the United States, freed from other pre-occupations, could aid him in a more effective manner. At

this time the northernmost detachment of the French troops were stationed as follows: One brigade at Zacatecas; one brigade at San Luis Potosi; the Mexican Division in Tula, Tamaulipas, and a detachment at Tampico.

During the year 1864, France made a general advance toward the north, occupying the states of Sinaloa, Durango, Chiuila, Nueva Leon and Tamaulipas. Satisfactory results were obtained in the central provinces by the dispersion of guerrillas. Other operations too numerous to mention took place toward the south. When the year 1864 was finished, the French army had caused the Imperial authority to be recognized over the greater part of the immense territory of Mexico. The seat of the Juarez government was then at Chihuahua.

In 1865, the French columns were pushed still futher toward the north and the French force was greatly increased by volunteers from Austria and Belgium. The occupation extended to the northern boundary of Mexico. A determined effort was made to drive Juarez across the border but without avail.

At the beginning of 1866, urgent demands were made by the United States that France should withdraw from Mexico. These demands were almost menacing, and on the 6th of April, 1866, the French minister to Washington stated that the Emperor had decided to withdraw the French troops, in three detachments, the first detachment in November, 1866, the second, in March 1867, and the third in November, 1867. At the demand of the United States these dates were afterwards advanced.

It was expected that after the departure of the expeditionary force, the Mexican Imperial government would retain, as a active force, about 8,600 men of the Mexican regular troops, 27,000 Rural Guards, 8,000 foreign troops, 6,400 Austrian volunteers, 1,300 Belgian volunteers, or in all, about 50,000 men with sixty-two pieces of artillery. But the Mexican Government was in financial distress and the Mexican troops, being poorly paid and supplied, were not reliable.

In the fall of 1866 the withdrawal of the French commenced gradually, moving toward Vera Cruz, leaving the Mexicans.

Imperial forces in charge of the towns which they evacuated. But the Imperial forces seem to have lost heart, and one by one these towns fell into the hands of the enemy. From this moment commenced the long and drawn out tragedy, which finally ended in the execution of Maximilian. The foreign troops employed by Maximilian, fought nobly, but the Mexican forces of Juarez were full of enthusiasm and patriotism.

The army of Maximilian received no quarter. In addition, the Mexican troops, according to the statements of the author, were reinforced, in numerous engagements, by discharged Union and Confederate soldiers, who came across the border and fought under Juarez. The insurrection became general throughout the country. Bands of guerrillas sprang up everywhere. Even the French troops had difficulty in making their way to the coasts. Maximilian was also deserted by his Austrian and Belgian volunteers, who insisted upon returning to Europe. Maximilian meditated abdication, and started for Europe, but was dissuaded by the clericals.

On the 11th of March, 1867, the last French soldier left Mexico. On the 19th of June, Maximilian, having been captured by the insurgents, was shot. But more terrible than the death of Maximilian was the fate of his Mexican supporters, especially of the higher officers of his army. Those who were not killed at once, were hunted from place to place, until found and executed.

CONCLUSIONS.

A study of Captain Noix's work would seem to bring out the following facts:

1. The excuse for the French Intervention was the failure to pay interest of the public debt and the general disorder in Mexico. This disorder was due, primarily to peonage, poor wages, poor food of the laboring classes, cheap drink, lack of education, and heavy taxation of the poor; taxation of necessaries, exemption from taxation of luxuries; exemption from taxation of land, resulting in the territory of the nation being parcelled out among a few great land holders, who were thereby enabled to maintain feudal conditions among their tenant farmers. "Owing

to these conditions the normal condition of Mexico from 1820 to 1877 was almost continuous warfare."*

2. The French occupation was not a conquest but an intervention. Its primary object was to restore order, and to establish a protectorate. Mexico was to retain her autonomy under the suzerainty of France. Incidentally, a monarch form of Government was adopted, and the clerical party, and the Catholic Church upheld.

3. In spite of many obstacles, including the opposition of the United States, the invading French forces obtained the active assistance of many of the best men of Mexico in the work of government.

4. Similarly they were able to enlist as allies, a force of over 30,000 Mexicans. These troops were usually faithful and for many purposes, efficient. That they were not more so, was due largely to lack of pay, the government being at times impoverished.

5. The establishment of the new government was primarily dependent on the ability of the French, to occupy, with their army, the City of Mexico.

6. The military problem of the occupation of the City of Mexico virtually became the problem of the translation of 30,000 men through the deadly and barren regions of the coast, to the fertile and healthy plateaus of the interior, where supplies were abundant. The French army could then practically cut loose, as far as food supplies were concerned, from its base at Vera Cruz.

7. Behind fortifications, the Mexicans fought bravely, in the open, poorly. For this reason it was often of advantage to turn fortified towns, occupied by the enemy, instead of attacking them. In the open the Mexicans were no match for trained troops of Europe. The Mexican army, in no one engagement, numbered over 15,000 men.

8. A large proportion of the Mexican forces were mounted. They were able to make long marches, strike quickly the communications, depots, and detachments of the French. To op-

*For this expression see *Encyclopedia Britannica*—Article on Mexico.

pose them, extraordinary marches were often made by the French infantry.

9. The French cavalry, small in numbers, but highly trained, were of enormous value in this war. Charging with the sword, they often decided the combat before the supporting infantry and artillery could come up; with the carbine they were defensively, as well as offensively, the best of infantry, and their mobility made it possible to reach quickly, important points, to cross, with facility, mountain ranges and deserts, making marches which would be difficult if not impossible to infantry. The proportion of mounted troops in the French eventually became very large, as, in addition to the Mexican Allied Cavalry which numbered many regiments, the French organized a large contingent of "Contre Guerrillas" being a kind of mounted infantry, mounted on native ponies and used for partisan warfare.

10. The most formidable enemy the French had to encounter were the guerrilla bands, some serving through patriotism, some through hope of plunder, which infested the whole of Mexico. These bands were mounted, lived off the country, seldom gave quarter, made war on the wagon trains, the depots, and the outlying detachments of the French, persecuted the French sympathizers, and forced the inhabitants into the hostile army. To oppose these guerrillas, the French had to use large numbers of mounted troops operating in small detachments.

11. The French attempt to establish a protectorate and bring about law and order throughout Mexico, would without doubt, have succeeded, had it not been for the opposition of the people of the United States to the French occupation, and the "aid and comfort" extended by the American Nation to the Mexican Insurgents.

CONDEMNATION OF PUBLIC ANIMALS.

BY VETERINARIAN GERALD E. GRIFFIN, THIRD FIELD ARTILLERY.

ALTHOUGH many changes for the better have taken place in the service during the past few years, no improvement in the method of selecting public animals for condemnation has been considered.

It may be proper at this time to bring this subject to the front with the object of attracting the attention of the military authorities, but to do this intelligently it will be necessary to refer to the shortcomings of the system now in vogue.

As it would be unfair and unwise to criticise an established custom without suggesting, what is thought to be, an improvement or a good substitute, both are offered here with the hope that they may be of benefit in regulating the number of animals to be submitted to the action of an inspecting officer.

The average commander of a unit in possession of public animals is not, as a rule, sufficiently acquainted with the animals in his charge, therefore, it necessarily follows that such an officer is dependent to some extent on the opinion of the stable detail when the time comes for the weeding out process and very often the opinion given is influenced by prejudice, and perhaps sentiment.

In nearly all organizations the animals selected for condemnation may be divided into four classes, viz.:

1. Old age.
2. Disability.
3. Unsuitable.
4. Unmanageable.

To these there may be added a supplementary class which for want of a better name will be designated as "*All bunged up and played out.*"

The old age class, a too numerous one, contains among others those which have given faithful service, often for fourteen or more years, and although still sound in wind and limb yet they lack the robustness of youth. As a consequence such animals are only fitted for the light work of a garrison. In this class are very frequently observed animals ranging in age from eleven to fourteen years, although the figures given on the cards of identification may show these animals to be as high as seventeen years old.

At present the ages given on the cards are not reliable as many of them were originally placed there by those who apparently had little knowledge of the age as indicated by the teeth.

It is nonsense to assert that the age of a horse cannot be determined with accuracy up to twenty-five years. The age of the horse may be as readily determined after nine as before it, but it will be admitted that the information furnished by the incisor teeth of the mule is not very reliable after the animal has passed ten, due, in great measure, to the extreme hardness of his teeth and their slowness of growth.

In the disability class are found animals rendered unserviceable and often useless by incurable diseases such as adhesions of the lungs, paralysis of a portion of the larynx, fractures, laminitis, disease of the navicularis, blindness, hernia, spavin, "heaves," etc., etc., but the animals presented in this class are less in number each year, due to an improving veterinary service.

The unsuitable class, generally horses, present defects of conformation, mostly of the back, withers and shoulders, that often render them entirely unsuited to the work assigned them. As a rule they are considered either too light, too heavy, too small or too clumsy.

In the cavalry, considerable stress is placed upon the undesirability of too high a withers, whilst in the artillery absence of well muscled shoulders on which to seat the collar is considered a sufficient reason for placing a particular animal on the "I and I" report.

The unmanageable class is invariably composed of animals designated by the generic name of "outlaws" which it is stated cannot be trained to the peculiar class of service to which

they, at the time, pertain. It is a difficult matter to regulate this class as often times the officer responsible for the spoiling of a good horse may have been promoted or transferred long before the spoiled animal is placed before the inspecting officer. The only fair method for handling cases of this kind is to place the responsibility for the proper training of remounts on the Post Commander.

This supplementary class referred to as "*All bunged up and played out*" is so designated for the reason that this is all the explanation forthcoming when the inspector asks "What's the matter with this animal?"

This supplementary class offers animals of low vitality which readily go to pieces under stress of hard work, yet they show no defect of wind or limb although, as a rule, the *tout ensemble* is not suggestive of endurance. Such animals as these might improve if proper provision was made for giving them a run at grass in the spring season.

On account of the scarcity of the active, light type of horse and the admixture of his blood with the heavier and more sluggish strains, the number of unsuitable horses submitted to the inspector is slightly on the increase, whilst the number of unmanageable horses, due to the beneficial influence of the Mounted Service Schools, is steadily decreasing, but to offset this decrease in the unmanagable class there appears to be an increase in the supplementary class designated as "*All bunged up and played out.*"

The type of cavalry horse now being furnished is not quite as good in quality as it was six years ago, and this is undoubtedly due to the effect of the usurpation by the automobile of the function of the light, active, well bred animals so desirable for pleasure and light delivery work.

There is a noticeable improvement in the type of light artillery horses now being furnished and upon this improvement the interest taken by the farmer, in recent years, in breeding active draft horses from Percheron and Clyde sires has had a beneficial effect. It is predicted that little difficulty will be encountered in horsing light field artillery in the future.

The mules now being furnished were never better. They appear to wear better, last longer and do better work than those

of fifteen years ago. The improvement in these animals is influenced by the keener market demand for first class animals and the efforts of the breeders to meet it. Their prolonged usefulness is certainly the result of more humane and intelligent handling, feeding and watering, and a realization at last that these animals are as intelligent as horses—which, by the way, is not saying very much for them—and respond as quickly to kindness.

It is conceded that an organization commander will not part with a fairly good animal for the sake of replacing him with a young, green one but this is not proof that he will decline to present serviceable animals, objectionable to him in some particular, to the inspector.

It has been said that the fact that an officer puts up an animal for condemnation ought to be in itself sufficient guarantee to the inspecting officer that said animal is useless. That the Inspector General's Department does not believe in this theory is evident to anyone who has witnessed a condemnation function. From start to finish the inspector is on the defensive whilst the responsible officer and his aides are as aggressive as they dare be. The sole object of the responsible officer seems to be to "put through" his animals by hook or by crook whilst the object of the inspector appears to be to defeat him, for in the few seconds in which the animal is before him it must be demonstrated beyond the shadow of a doubt that the animal in question is unserviceable, and very often then the inspecting officer is not open to conviction, although in many instances a good talker invariably takes the odd trick. In struggles of this character truth would indeed appear stranger than fiction.

Many inspectors lean upon the veterinarian present for strength and comfort in bearing up against the attacks of aggressive organization commanders and their aides, but it too often happens that the veterinarian knows as little as the inspector about the animals presented. This lack of knowledge on the part of the veterinarian is due to the fact that he had not been consulted at all when the animals were selected, and the first intimation he may have had of the condemnation proceedings was when he received a telephone message directing him to meet the inspector at a definite time and place.

In a great many cases the veterinarian is expected to aid the organization commanders in getting rid of undesirables and should results not be as anticipated a fair share of the blame for failure falls to the lot of this unfortunate and ill considered individual, who being officially a nonentity and without voice on all other occasions is now, when the inspecting officer is to be cajoled and placated, solemnly marched to the front and center and expected to be a Daniel come to judgment.

The foregoing being considered a fair exposition of the present method of selecting and condemning public animals it is scarcely necessary to state that it needs readjustment; one that will render it fair to the service, the remount department, the inspector, and the organizations.

To the writer's mind the remedy offered has a tendency to eliminate the unproductive sparring between the inspector and the responsible officer at the place of inspection, while keeping within reasonable bounds the number of animals submitted for the inspectors action.

Scheme:

1. Designate the maximum annual percentage of animals which may be condemned, exclusive of those dying of disease and accident.

2. For cavalry, signal corps and similar horses

	10% per anum.	
For field artillery horses.....	9%	"
For mountain artillery and pack mules..	8%	"
For draft and riding mules, M. G. P.,		
inclusive.....	7%	"

3. No unmanagable animals to be condemned and none to be transferred except by mutual consent.

4. Heavy, unsuitable animals of cavalry are rarely, if ever, suited to light artillery work—shoulders undeveloped.

5. Horses not to be transferred to Quartermaster Corps except upon request.

6. Animals to be condemned and sold but once a year, preferably between August and October.

7. Remounts to be furnished only in the fall.

8. The Post or other Commander to appoint a board to select animals for condemnation, said board to submit a report in full giving reasons for selection and a short, concise history of each animal selected. Animals approved of by the Post Commander to be branded with an "S" under mane. The history of each animal to be furnished the inspector and at least one member of the board to be present at the inspection point to give reliable information in each case.

9. Enlarge and make more complete, as to the history etc. of the animal, the identification card.

10. Direct all veterinarians to make a quarterly report of all hospital cases on a proper form.

11. Publish to the service the number of animals condemned in all organizations, with cause, when the number of such animals reach the maximum percentage allowed.

PRESSING NEEDS OF OUR CAVALRY.

BY CAPTAIN LE ROY ELTINGE, FIFTEENTH CAVALRY.

THE writer's only excuse for perpetrating this article is that we have a board in existence for the consideration of the needs of the cavalry and though that board probably has no need for an exposition of the views of a rank outsider, yet it will do no harm to start a discussion as to what we really do need most.

There has been some talk as to whether or not we need certain things, but so far, I have not seen a statement of what any one officer thinks we need and should expend our energies in working for—a constructive policy in outline:

We need:

1. Men.
2. Horses.
3. Arms.
4. Supplies.
5. Other things of lesser importance.

I. MEN.

Whatever organization may be best suited to a cavalry regiment, we have, on a peace footing less than enough men to make fifteen regiments of cavalry for war.

Should war be declared suddenly, we would lose so many men by details, promotions to volunteer rank in other arms or corps, left behind for one purpose and another, etc., that those now on the rolls would not make fifteen regiments of any organization that has been suggested.

How are these men to be replaced? How are the casualties of concentration camps and of the war to be replaced?

Untrained men thrown into the ranks in campaign lose or spoil their arms, kill their horses and hamper the instructed

men that are afflicted with their company. As someone recently said, "You would not give a butcher a transit and expect him to be a surveyor. He would accomplish nothing except to ruin the instrument. Why then give arms and a horse to an East Side garment worker and expect him to be a cavalryman."

To bring our organization up to even their present peace strength with trained men and horses and to keep them there for even a short campaign is beyond our present resources.

There is no use in inveighing against the condition that confronts us unless we can point out the plans and specifications that can be practically used to remedy the condition.

The recently inaugurated reserve system is a start. Perhaps it will be strengthened in time. The points of weakness as they now exist are: (a) No men yet available thereunder; (b) no surety that the men of the reserve will be forthcoming when wanted; (c) total lack of organization of those composing the reserve.

To be available these men's addresses must always be known, they must be permanently assigned to regiments, preferably those in which they have served and their uniform and equipment packed and stored with their regiment.

Unless they can be counted on in a specific and accurate manner, they had better be left out of the calculation.

It is not improbable that the War Department contemplates handling these reserves in just the manner described. It will be nearly three years before it will be of any practical importance how they are handled.

Another way of adding to the reserve, that I have never heard mentioned, is simple and could easily be accomplished. Annually we are discharging by purchase a considerable number of men. These are in the main excellent men. If, instead of selling a man his discharge the War Department would sell him an indefinite furlough from his organization without pay, make him pack and store his uniform with that organization and remain subject to call to serve with it, in case of war, until his enlistment expired, a considerable available, useful and efficient reserve would soon be created, and *it could begin to be formed now.*

Both methods together will probably never be sufficient but they are all we have in sight and together they may in time go a long way toward accomplishing the desired result.

In case of war on our own soil, cavalry will be needed at once, its losses will begin almost immediately and will continue throughout the war.

Untrained cavalry is nearly useless and it is criminal to ruin what little trained force we have by mixing with it untrained men and green horses. The endurance of cavalry is measured by its weaker horses, its reliability by the training of its poorer men.

First we need capable trained men enough to insure that our organizations will be filled when war breaks out and an available supply of the same kind to replace the losses of campaign.

During the Civil War the cavalry regiments soon ran down to mere skeletons. The same defect is potentially with us now, just as it always has been.

Organization is unimportant unless there is something to organize.

After a month of a war that called for all our resources we would have left 15 cavalry organizations of 200 to 350 men each of trained cavalymen, and less serviceable horses. We might increase the numerical strength, but it would be no increase in fighting efficiency, rather it would for some months be just the reverse.

(2) HORSES.

With respect to horses our situation is worse than for men.

The peace strength in horses is not complete. Many of those now in service are unfit for campaign, being kept on because they will do for garrison work, if it is not too hard.

We have no available reserve of horses and no organized system by which one is expected to be materialized.

Could we, in event of war, procure suitable animals, they would be untrained, their weight carrying and jumping muscles would yet have to be developed, their backs hardened and their minds taught to obey the rider's signals.

The enormous losses in horses during the Civil War have been frequently noted, but the fact that these poor animals, green, soft, undeveloped, put suddenly at hard and unaccustomed work, for which many were unfitted by conformation, were ridden by men as green at the work as themselves, is seldom noted as the reason for these large losses.

Those who saw the horses that went to the Philippines in 1899 and 1900 will testify that the few horses that were needed for that occasion were obtained by accepting animals of inferior quality. Conditions in this respect have not improved since 1899. Our unorganized reserve of horses is of no better quality and even less available than then.

Our remount system does not supply enough horses for time of peace. In about five years the efforts of the Agricultural Department to supplement our remount system may begin to be seen. Whether these efforts will be of any great service to us depends on the manner in which we organize a remount system based on the supply of horses that it is hoped will be produced.

The question then arises, is there anything that can be done now?

There are quite a number of suitable horses (and mares) on which the government could, for a small sum, secure options.

If properly employed, a system of government options on suitable animals could be made to accomplish the following results:

(a) Have each troop commander furnished with a list of the particular selected animals that are to fill his troop up to war strength on twenty-four hours notice.

(b) Have every regimental commander in possession of a list of the particular animals that are to be used to begin the remount depot that is to keep up the supply of at least partly trained animals for replacing the first losses of campaign.

(c) Have the Quartermaster's Corps in possession of options on enough selected animals suited for cavalry purposes to organize some volunteer cavalry and also to replace losses during the war.

(d) Have arrangements made as to where regimental and quartermaster remount depots are to be established.

(e) Have the details of shipping, feeding, shelter, care and training of remounts for war organized and capable of being put in operation in a week.

(f) Add a decided stimulus to the breeding of horses suitable for cavalry use.

The cost of a suitable mount, *delivered at the place where he is to serve* is now about \$200.00.

Taking the average usefulness of a horse as six years, we may estimate roughly that his total expense to the government will be:

Original cost.....	\$200 00
Shelter, 6 years at \$15.00	90 00
Forage, 6 years at \$108.00	648 00
Medicine, etc.....	12 00
	<hr/>
	\$950 00

Just as suitable an animal, selected with as great care after examination by the very same veterinarian could be kept under option to the government for the same length of time for probably, \$50.00. (Amount graded according to the age of the animal.)

To form an efficient and readily available reserve of horses by this method of options requires, the same as with the reserve of men, that they be reserved for a particular organization and subject to call of the organization commander whenever he receives notice that war is imminent and that he is directed to mobilize his command in readiness therefor.

It will be perfectly possible to denature an option system on horses so that it will be a good graft without benefit to the government, but it can and should be so organized as to insure a supply of good animals being always available and at the same time help make it profitable for the farmer to raise cavalry mounts.

(3) ARMS.

Arms and equipment we have. There may be and is, difference of opinion as to whether or not those we have are the most suitable, but they are of good quality and serviceable. The most crying need is not here.

(4) SUPPLIES.

Supplies that will do we can obtain. For a big war there will be fortunes made out of inferior supplies that will be furnished the government at high prices, but something that will serve is within reach of the big depots that can be formed at any suitable railroad points. How are these supplies to be forwarded from the depots to the troops in the field?

First, no doubt, they will go by commercial lines to the point where, due to active operations, commercial traffic ceases. From there to where the wagons of the supply trains can reach them there is an hiatus. This hiatus is properly bridged by a railroad battalion. We have none, even in contemplation. When one is needed and it fails to rain railroad troops we will detail some more or less suitable men from the troops and get along some way. This depletes the fighting strength of the troops and gives inferior results but is all there is to hope for.

The supply trains as well are nebulous. We have wagon companies in the Field Service Regulations but real men and horses can not subsist on the theoretical supplies that these theoretical wagon companies carry.

The Quartermaster's Corps is composed of a miscellaneous assortment of clerks, school-teachers, bakers, carpenters, paper-hangers, blacksmiths, teamsters and jacks-of-all-trades, but we have no organized wagon companies and very few pack-trains.

We have a moderate supply of wagons and harness. We lack some mules of having enough transportation to complete a peace footing. These latter would be more than used up for regimental trains. There is no reserve of either draft or pack-animals for the organization of the supply and ammunition trains.

Here it is thought that the Quartermaster's Corps might improve its organization by organizing the personnel of wagon companies. Teamsters, laborers, clerks (checkers) corral bosses etc., should be members of wagon companies first. If, after they know their duties as such, they can be utilized in time of peace for other useful work about the posts, so much the better.

Animals for forming these trains could be held under option the same as for the additional cavalry horses that will be demanded at the outbreak of war.

Each wagon-master should have the personnel of his wagon company organized at all times, have his wagons and harness packed, marked and stored and have his own particular draft animals under option within twenty-four hours call, so that on orders from higher authority he can within forty-eight hours produce a complete wagon company ready to take the field.

When cavalry divisions are to be formed for war, they will need supply and ammunition trains at once. (By the way, what is your conception of what our ammunition trains are expected to be like?)

Cavalry divisions need good transportation, capable of doing hard work. Improvised transportation for this purpose will be a cause of annoyance, delays, loss of sleep and food for the troops, loss of forage for the horses, and, finally they will cause so much hardship, lead to so much sickness and produce such slow movements that they greatly reduce the fighting value of the force. These things are what lead to a force being out maneuvered and out fought by a force of half its size—and our cavalry will get the blame for the inefficiency. The people will demand the results, even though they have not furnished the tools.

(5) OTHER THINGS.

Like the minor considerations of organization, the particular pattern of arms and equipment and the exact components of the ration, all other things than those considered above are non-essentials. Conveniences and aids to efficient work they are, but, save proper instruction, which will not be considered here, they are not essential.

A hasty and incomplete estimate of the cost of the policy outlined above indicates that it would cost five per cent. of what we now pay for fifteen regiments of cavalry to get our cavalry on a footing such that we would have available for war a sufficient reserve of trained men, suitable horses and appropriate transportation to enable our cavalry to look forward to being able to give a good and satisfactory account of themselves.

War strength in time of peace in men and horses would vastly improve the situation, but as long as our country must hug the delusion that it is saving money by keeping up a peace establishment unsuited to war, we might try to persuade them to make the necessary preparations for the transformation to a real fighting force when war becomes necessary.

Fully thought out and efficiently executed the above plan will more than double the fighting strength and more than quadruple the fighting value of our cavalry. Is five per cent. additional cost too great a price to pay for such results?

NOTE.—Please notice that this plan does not call for the appointment or promotion of any officer.

THE QUESTION OF THE PISTOL.

BY CAPTAIN H. S. HAWKINS, FOURTH CAVALRY.

THE time has come apparently, when the cavalry must decide, or some one must decide for it, whether it is to lose or retain the pistol as part of its armament. The ordnance department has issued the new automatic pistol to the field artillery and to certain elements of the infantry, but is waiting as far as the cavalry is concerned to learn whether or not we are to retain this weapon as an arm for the trooper. Thus far has the campaign against the pistol progressed.

It is time therefore for any pronounced ideas on the subject to be heard before it is too late.

I have always been in favor of retaining the pistol and if I had been inclined the other way my recent experience with a French cavalry regiment would certainly have arrested any such inclinations and confirmed me in my former views. This not because the French cavalry have the pistol but because they have not.

The subject of the saber versus the pistol and *vice versa* has been discussed for many years in our cavalry service. This paper, however, has nothing to do with that question nor is one against the saber but is one favoring the use of the pistol. We need both.

It is unnecessary at the present time to defend the saber as it does not seem to be in danger. But with the pistol it is otherwise, and it is intended to show herein that sometimes the saber is nearly useless and the pistol a necessity, in spite of European opinions on the subject.

At the outset, it must be remembered that the pistol is a national weapon with us and that our men have confidence in it. This will remain true for many years in spite of immigration, unless we take it away from our troopers and deliberately

throw it into disrepute. This is an important fact, for a weapon in which men have faith is a moral asset and the question of morale is a preponderating one.

It is a mistake for us, Americans, to view the matter through European eyes, because our cavalry more than any other in the world is liable to be used in various sorts of small wars against savages or semi-civilized people, or in small operations as a police force. Furthermore, it is intended to argue that even in war against a modern army of a civilized nation our cavalry, in its smaller operations, its service of security and of information, and even in its participations in the battle itself in combination with other arms, needs the pistol.

Contrary to the views held in some quarters, a prolonged study of the use of cavalry in war leads one to believe that its principal usefulness is not in reconnaissance and screening, but will be found, by a general and a staff who know how to use it, in the battle itself in combination with other arms. There is not room here to demonstrate this fact, but the history of modern war amply establishes it. In the light of our present information about the war in Manchuria the absence of great cavalry operations or of great cavalry successes, instead of indicating the decline of the usefulness of cavalry in modern war, as was believed or asserted by some at the time, now accounts for the failure of the victorious army to win a single decisive victory. All victories may be said to be decisive in that they are definite and lead to some end, but the Japanese failed, even at Mukden, to inflict a defeat sufficiently decisive to paralyze the further effective operations of the Russian army. And it is now realized that the Japanese had shot their bolt and that the treaty of Portsmouth possibly saved them from an ultimate defeat.

Who can doubt that a powerful and numerous cavalry would have made Mukden the last stand of the Russian army in any formidable force? The Russian cavalry itself was the only obstacle.

The usefulness of the pistol in the battle will therefore be first considered.

We can divide the subject into five parts under five heads convenient for discussion, viz:

1. The pistol for cavalry in the battle in combination with other arms.
2. In the combat between masses of cavalry.
3. In the service of security and of information.
4. In minor warfare with semi-civilized people or savages, or in partisan or guerrilla warfare.
5. In duty as a police force.

I.

In the battle cavalry must take advantage of opportunities to attack the hostile infantry and artillery. Opportunities for cavalry to have attacked exhausted, much shaken, or retreating infantry can be found in the history of every war of the last one hundred years, by merely searching for them. Now I, for one, certainly do not believe that cavalry charging with the saber against infantry even in the condition in which infantry is supposed to be vulnerable, can effect anything but disorder and a further increase in the latter's demoralization. Infantry has merely to lie down and to shoot at the cavalry as it approaches and again after it has passed over them. And this is the most natural thing to do even for infantry in the condition stated. It is this condition of the infantry which allows the cavalry to approach close enough to ride over it. But after it has reached the infantry the cavalry can do nothing with the saber, or almost nothing, in the way of casualties. Such attacks by cavalry should always be backed up by infantry and the hostile infantry thus halted and put completely out of hand by the cavalry should be easily captured or routed by the supporting infantry.

But often there will be no supporting infantry ready at hand.

Now the hostile infantry has been much shaken, defeated, reached perhaps its limit of endurance, and lost its morale by *fire action*. The moment it is charged by cavalry this fire action ceases. And while charging cavalry undoubtedly has a great moral effect in itself this cessation of fire may allow the hostile infantry to catch its breath and to almost welcome the cavalry charge as a relief from the terrible fire to which it has

been exposed. Under certain conditions, however, the cavalry is able to reach it. And now this cavalry in order to have any permanent success must renew this fire action and empty its pistols into the disordered and broken mass. Thus it may induce such infantry by a slight increase in its losses and the moral effect of the charge itself to absolutely quit and surrender in all haste.

Cavalry charging infantry with the saber, can effect scarcely any losses and will not have the same measure of success. It must be remembered that there is no shock action against infantry lying down.

In pursuing retreating infantry cavalry will undoubtedly make use of its fire action on foot, as in the case of Sheridan at Five Forks, but that phase of the matter we are not discussing.

At Vionville on the 16th of August, 1870, the famous charge of Bredow's brigade of German cavalry passed completely through and over the 93d Regiment of French Infantry. The men of the latter command threw themselves flat on the ground and the horses passed over them, scarcely touching any of them, and but few were cut by sabers. Had the cavalymen been armed with pistols, and, leaning far down, had they fired into the backs of the prostrate infantry, certainly that regiment would have suffered losses and been more demoralized than they were. Even as it was they could not be gotten in hand for some time.

The saber is always at hand after the pistol is emptied, and with fewer opponents to combat.

Our artillery has been armed with automatic pistols. Imagine a cavalry force only slightly superior in numbers to the artilleryman, succeeding in reaching a battery. The artillerymen placing themselves behind the guns, the limbers, the caissons, the wheels of the different carriages, will if properly trained, wait till the cavalymen are fairly upon them and then use their pistols to good effect. They can scarcely be reached by the sabers of their opponents. Such opportunities to the cavalry are always fleeting. And unless support comes to the cavalry before it comes to the artillery the latter will escape. To make the artillery surrender will be the only hope that the cavalry may have to capture the battery. But will the artillery

surrender? Not at all. They will probably drive the cavalrymen off. The latter, to be sure, may run off a few of the artillery teams and this may or may not be disastrous. But even this is doubtful, and certainly here, the cavalry man would curse the day which had separated him from his pistol.

II.

In cavalry charges of masses of cavalry against cavalry the case is different. Here the saber and the lance might be the most effective. However, the assertion that the pistol in this case is as dangerous for friend as for foe has never been proven.

Should we have to meet a cavalry armed with the lance the pistol would certainly be useful if we adopted suitable tactics. Certainly for small bodies capable of maneuvering the pistol should prevail. For large bodies we still have our sabers.

Those who argue against the pistol for cavalry combat always have in mind the charge of cavalry masses and base their arguments on the assumption that that side which is armed with pistol and saber will charge at raise pistol, will empty this pistol in the *mêlée* and then draw saber. Indeed this is the usual idea. Thus, it is argued, the pistol will be emptied at the moment of the greatest excitement, after the shock, in a wild confusion. And under such conditions many shots will miss adversaries and hit friends. Then the trooper must stop fighting to draw saber, and in the meantime the opponents, who have been fighting from the first with the saber, will have gained an ascendancy.

Possibly this might happen; but why confine ourselves to this order of procedure? We cannot prescribe a fixed rule, but usually I would reverse the order and commence with the saber instead of the pistol. The pistol should be reserved for either of the two following contingencies, one of which is certain to happen. If we gain the upper hand in the combat the enemy will turn and run, and, by escaping attempt to rally or reassemble after our pursuit is finished.

Now, the moment the enemy breaks and ceases to offer offensive resistance the pistol becomes to us invaluable. We should not pursue with saber in hand but should draw pistols and use them. There would not be time to return the sabers

into the scabbards, so they should either be allowed to hang by the saber knots for the few seconds necessary, or clutched in the bridle hand, or run through the strap attached to the saddle for the purpose and looped sufficiently large to render it easy to insert the point of the saber. The losses to the fleeing cavalry could thus be made serious. Such would not be the case if we were limited to the saber.

Again let us take the other case, that in which we commence to give way, either outfought or overpowered by numbers. It is at this moment when our troops give way that the pistol should be drawn and used. (Our men should be practiced in thus changing from the saber to the pistol, both in the pursuit and in the retreat. In a fight they would then always remember it as a last resort. Otherwise they will be sure to forget it altogether.) Nothing is so easy as to fire to the rear, our morale would thus be restored, if not the victory itself, and the ardor of the enemy in his pursuit would receive a rude check.

A trooper with saber or lance pursuing a trooper armed with the pistol is at the mercy of the latter if he retains his morale, his head. Both moving at the gallop, the pistol man has only to allow the swordsman to gain upon him until the swordsman is within a distance making a pistol shot almost certain, but just too far for the reach of a sword.

As a preservation of morale the pistol under such circumstances would be incomparable. It might even turn the retreat into a resumed offensive attack with saber in hand, and the defeat into a victory.

Who, then, can assert that our cavalry, in its part in the great battle, combining with and assisting the other arms, or alone in deadly combat with masses of the hostile cavalry, has no need of the pistol?

III.

The duty of patrols and scouts and messengers in the service of security and of information is often extremely hazardous and leads to delicate situations. The journals of cavalymen who have participated in this work in any of the wars of modern times are filled with accounts of stirring experiences, numerous

combats, skirmishes, and small affairs quite large and serious enough for those engaged.

If the patrols are to accomplish their missions, and who can tell how much may depend upon the success of a single patrol, the troopers must be bold and confident in their ability to hold their own against the enemy. A high state of morale must exist, and for this to be so and to continue so the troopers must be successful in their first encounters with the enemy's small detachments. It is for this purpose that we must carry the pistol, if for no other. A cavalryman on patrol duty without a pistol is the victim of anybody with a firearm. The history of the German cavalry in the war of 1870-71 shows conclusively to the student, the timidity of the small patrols in advance and in a hostile country. A good pistol and the knowledge of how to use it would certainly have added to their sense of security to their independence, their boldness, and therefore, to their efficiency.

It is obvious that the circumstances of the case will often forbid the scout or patrol to dismount in order to use his carbine, and he cannot use it to advantage mounted. He must have a quick and handy weapon because his encounters must nearly always be in the nature of surprises.

If we imagine two hostile patrols meeting, one armed with sabers or lances, the other with pistol and saber, what is to be expected? The European cavalry is taught, under such circumstances, to charge immediately and that that party which charges first will succeed against the other. But if we imagine the other side armed with automatic pistols and with room to maneuver so as to surround the lancers, keeping just out of reach of the latter's weapons, who can doubt the result?

In a narrow road bounded by walls or fences preventing the proper amount of dispersion for the above maneuver the pistol men would only have to turn and pretend to flee, allowing the others to gain upon them till within a sure range for their pistols but just out of reach of lances or sabers. Then still remaining, at the gallop, they turn in their saddles, and in a few moments, the combat is finished.

These maneuvers are always possible for small patrols. Under any condition where they are impossible the saber is the other alternative.

The question as to whether to begin with the pistol or the saber must always rest with the chief. But with small bodies the conditions are not the same as with large masses on account of the former's ability to maneuver. The pistol would generally be for them the logical arm with which to commence the combat, and it will generally be sufficient to end it.

While accompanying platoons of French cavalry in their practice and instruction in this kind of work, called "*Service en Campagne*," I have been strongly impressed with the helplessness of these men, scouting saber in hand, should they suddenly meet our cavalry patrols armed with automatic pistols, or even the old Colt's revolver. Our cavalry armed with such weapons would soon have the advanced elements of the enemy's cavalry completely cowed, and our patrols could go anywhere. Even if the enemy gained the ascendancy over our cavalry by defeating it in open battle our patrols would still keep the upper hand and the hostile patrols would never dare to go far from support. The history of the German cavalry in reconnaissance in the war of 1870-71 amply justifies such an assertion.

In our Civil War, General Forrest had many fierce personal encounters with Federal cavalry. On one occasion he and his escort were caught and surrounded by Federal cavalymen who attacked with sabers and made strenuous efforts to get at the General himself. But those who did so were very unfortunate for he killed several of them with his pistol, and he and his escort after discouraging the cavalymen considerably by means of their pistols cut their way through without pursuit, although the Federals were in superior numbers. Those pistols caused the Federal saberers to lose interest.

Then again, in a hostile country the small patrols may be much annoyed and seriously threatened by the inhabitants. As they ride through small villages this may be a serious matter, and they may need a handy fire arm. In the Franco-Prussian War the German cavalry had many experiences of this kind. Depending upon their sabers and lances they were often seriously annoyed, fired at from windows, held up by men with pitchforks behind barricades, and sometime threatened, even in as large bodies as an escadron, with very grave dangers. The details of all these small affairs convinces one

of the inestimable boon the pistol would have been to these German horsemen.

Two examples will suffice.

After Sedan a brigade of German hussars were sent to ascertain if a force of French infantry reported at Rheims was still there. The brigade arrived at l'Ecaille and pushed an escadron forward on Rheims, September 3, 1870. The following is the account of a Lieutenant of this escadron.

"The escadron advanced straight on Rheims, through the fields, avoiding inhabited places. Several hundred paces in front of the town the Captain halted the escadron behind a little rise in the ground. At this moment a military train was in the act of leaving the railway station. The inhabitants stated that this was the last echelon of the Corps Ninsy.

"Immediately patrols were sent to the station, around the town, and even into the town; the inhabitants showed themselves very hostile. The Captain then went to the entrance of the town accompanied by several hussars, explained to the Mayor that the escadron was going to go through it and that if it showed hostility it would be bombarded by the artillery which was following.

"During the conversation many of the inhabitants had drawn near shouting and gesticulating. The Mayor then explained that he did not answer for the inhabitants and that the latter could not suffer their large town to surrender to a single escadron. The Captain reported to the brigade asking the support of at least a regiment.

"He then broke into column and entered the town in spite of the effervescence of the population. At the beginning of the march the streets were so broad that we were able to remain in column of platoons. Everywhere the crowd recoiled frightened before the compact mass which marched at the trot.

"Suddenly before the first large square was reached some shots came from several houses. While continuing the trot the hussars fired into the windows. One of the inhabitants received a shot in the head; he was the only one hit. It was necessary afterwards to file into a narrow street which led to the square of the mayoralty.

"Once arrived the escadron deployed halted, at advance corbine, watching all the movements of the inhabitants who flocked around us. The Captain then passed the command of the escadron to Lieutenant Droste, with orders to occupy the square and to defend it if need be while he himself went to announce the occupation of the town. The first rank of the escadron was maintained opposite the mayoralty; the second rank made a half turn and sought to hold as completely as possible the square and the issues of the neighboring streets. The inhabitants, who in spite of urgent warning, refused to move on were trampled under the feet of the horses. This example produced its effect and in spite of the imprecations which rose on all sides against the escadron, nothing serious happened to it.

"After an hour and a half of impatient waiting the escadron was delivered from its dangerous situation by the arrival of the regiment."

A French officer who uses this incident to illustrate the necessity for firmness and clear headedness in conducting reconnaissance among hostile inhabitants, adds:

"The situation of the squadron in a large town like Rheims was delicate and could not be prolonged without danger. In remaining mounted it could cause the square to be cleared but it would have been impotent against shots coming from the windows. In order to watch them and because of the intimidation which the menace of fire arms produces, it seems that the dispositions taken should have been completed by several groups of troopers on foot ready to use their carbines."

An examination of this incident shows the impotence of this cavalry troop when the population was really aroused. They were able to clear the streets in front of them but they were not able to protect themselves against people taking shelter in doorways and windows, and throwing missiles or using fire arms. They did attempt to use their carbines while marching but one can imagine how inconvenient and difficult this was. They did not dare risk moving through the streets again and the French officers' solution just quoted, to dismount several groups of men and deploy them ready to use their carbines, would perhaps have been the wisest.

But if all these one hundred and fifty troopers had been armed with automatic pistols and had taken up a suitable formation, they would undoubtedly have been able to march wherever they chose without such grave danger. By severe punishment here and there, if necessary, they would have intimidated the population, and to remain mounted would not have been so dangerous.

In fact under these circumstances to remain mounted would have been best, for, by dismounting, a troop in such a situation loses not only its mobility, an important thing to preserve here, but also that moral ascendancy which mounted soldiers have over undisciplined crowds.

With pistols, then, their situation, delicate in any case would certainly have been improved.

Another instance in the same war is the experience of the 17th and 18th Uhlans, in the town of St. Quentin, on the 16th of January, 1871.

These troops had been quartered in St. Quentin for eight days. On the approach from the north of the first elements of the infantry of the French Army commanded by General Faidherbe, these regiments which formed part of a detachment covering the extreme right wing of the first German Army, were ordered to evacuate the town and fall back on Ham. The order was not given till 8:00 A. M., and at this time the French brigade of Isnard had taken possession of the outskirts of the town. They were held in check by a battalion of German chasseurs, which, with a battery of artillery, had also been quartered in the town.

The Uhlans and the battery were ordered to a place of assembly for the detachment on some heights southwest of the town.

"On account of the excited state of the population," says the history of the 17th Uhlans, "no signal was given; the orders were carried by orderly officers.

"The streets were soon filled by hostile inhabitants over-excited by the approach of the French Army, listening to the fusillade which drew nearer and seeking to impede the movements of the Saxon troopers who were obliged to trample several of these under the feet of their horses.

"Cannon balls fell here and there on the troopers hastening towards their points of assembly.

"Some men threw themselves against the great gates which had been closed; on their appearance in the streets many were stopped and separated from their horses.

"Several fell with their mounts on the ground heavily covered with sleet and groups of the inhabitants, uttering loud cries, sought to take them prisoners.

"The escadrons had much trouble in getting out of the town; they went pell mell with the batteries whose horses fell on the sleet. The shots of the enemy who were drawing near increased the disorder; men and horses were killed or wounded. They lost three killed, eight wounded, twenty-five prisoners, thirty horses—of which ten were those of officers."

This incident shows the necessity of evacuating a hostile town in plenty of time. The Germans had information of the approach of the French in ample time, but, through failure to calculate the time necessary under the difficult conditions to evacuate this town, the result had all the nature of a surprise.

Under these conditions a few well directed pistol shots from the harrassed troopers would have made the inhabitants keep their distance, and the bold attempts to capture individual troopers here and there would have ceased. With their horses struggling to stand up on the icy ground, to use the carbine was impossible, and likewise the saber was of little value, against a population armed with crude weapons.

But pistols could have and no doubt would have been used to a very good purpose.

IV.

In warfare against savages or semi-civilized people in which cavalry is very useful the pistol is indispensable. Such people will never meet us in mounted charges except possibly in very dispersed order. The difficulty will always be to get close enough to them to use the saber.

The Indians rarely met our cavalry in hand to hand encounters close enough for the saber, although they did sometimes charge mounted in dispersed order using fire arms as their principal weapons.

The Filipinos never allowed us to get to close enough quarters to use the saber although we did on several occasions use the pistol with great effect.

The Boers never gave the English much opportunity to use the saber, although on rare occasions they did use their lances.

The Moros, indeed, will often come to close quarters; but where is the man who wants to meet a Moro with a saber?

Partisans and guerrillas will never come to meet us in shock action or within the range of cold steel. Operating in small numbers they can maneuver individually and use pistols effectively.

The pistol for our cavalry in such warfare is a necessity and it needs no further argument to establish the fact.

V.

On police duty our cavalry without pistols is liable to be treated as were the 17th Uhlans in St. Quentin.

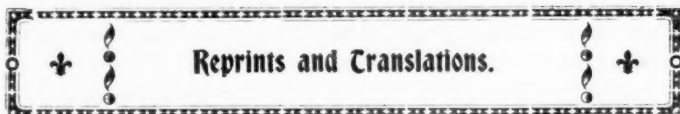
The saber is often extremely useful and has a fine moral effect in riot duty. But there will be times when the mounted trooper will need a fire arm and will need to use it quickly. He must, therefore, have the pistol. Anyone's imagination can present to him the circumstances, and an example is not necessary here.

Finally, take away our pistols and the morale of the cavalry will be impaired. Occasions will arise when its impotence will make it the laughing stock of its comrades in the other arms. Its proud spirit will suffer, and the American cavalry will have lost its distinction.

Europeans say that they cannot teach their men, drawn mostly from the peasant class, to use the pistol. I do not believe it. They are afraid of the pistol—we are not. That it is dangerous is admitted, but that it is more difficult to use than the saber or the lance is not admitted.

European cavalrymen extol the lance but at the same time admit that it requires very good horsemanship and much practice to use it with good effect. We ourselves know that the same is true of the saber. The pistol is no less difficult but no more so

I repeat that this is not an argument against the saber. There is no question in the mind of most cavalrymen as to the need of the saber. But the pistol is the compliment of the saber, and especially for American cavalry it is indispensable.



THE ARAB HORSE.*

BY COLONEL SPENCER BORDEN.†

IT was the fashion a few years ago to claim that the Arab horse did not exist, excepting as a figment of the imagination. Scientists, later, were compelled to acknowledge that there was such a horse, and that he differed from all others even in his anatomy.

Then a claim was put forward that what was called an Arab was really an African horse, originating in Lybia, the country lying between Egypt and Tripoli, on the shores of the Mediterranean.

These wise people even asserted that the horses we had always called Arabians, were never in Arabia until after the beginning of the Christian Era, some going to Egypt, others sent from Cappadocia, north of the Taurus mountains, on the Black Sea. The fact that no such horses remain either in Lybia or in Cappadocia, although they are numerous in Arabia, caused no embarrassment to these pundits.

Had such special pleaders gotten their Xenophon or Herodotus from the upper shelves of their book-cases, certain embarrassing facts might have caused them to modify their contention.

* From "Our Dumb Animals," for April, 1913.

†Colonel Spencer Borden, of Interlaken, Fall River, Massachusetts, is a life-long lover of horses. His Arab stud contains some of the choicest Arab stock ever imported into this country. To his study of the horse he has brought many rare qualities of heart and mind.

They would have learned that Semiramis, who succeeded her husband, Nimrod—builder of Nineveh—had an army in which were 300,000 cavalry, with which she invaded India, before she started to build Babylon. Nineveh is perpetuated by the present town of Mosul, built on its site, in the northeastern part of Arabia, on the Tigris river; and the ruins of Babylon are near Bagdad on the Euphrates, both these points being in the heart of Arabia.

We are forced to believe therefore, that there were some horses in Arabia, at least 3500 years B.C. Not only is this certain from the written record, their representation is preserved by bas-reliefs in stone uncovered by Layard, when he explored the ruins of Nineveh, in the middle of the nineteenth century. These show horses of the Arabian horse size and type, ridden by men making use of them in a manner such as no horse but an Arab was ever known to stand up to. The riders are hunting lions, with spears and arrows. It is notorious to this day that no horse but an Arab has the courage to face a lion or a wild boar.

If these would-be scientists still claim the proofs insufficient to establish our contention, we turn to the history of Cyrus the Great, as written by Xenophon. When Cyrus fought Croesus, King of Lydia, it is plainly stated that part of his cavalry were Arabians. In arranging his forces to meet the enemy, Harpagus suggested that he put the camels he used for transport animals, in front of his cavalry. And when they came up to the contest, the Lydian horses, terrified by the sight and smell of the camels, became unmanageable; while the horses of Cyrus' army, having been brought up with camels, and partly nourished on camels' milk, were not afraid, but dashed after the Lydians and completely routed them.

Later, when Cyrus captured Babylon—the night of Belsazzar's feast—he celebrated the event by a grand review of all his army. This was 500 B.C., 3000 years after Semiramis. In that review Xenophon tells us Cyrus praded 120,000 cavalry (more than all the cavalry in Europe today) besides his chariots drawn by four horses each.

This parade was in the heart of Arabia; and the empire ruled by Cyrus extended from the Indus river on the east, to the

Red Sea, the Mediterranean, and Aegean on the west; from the Black and Caspian Seas on the north, to the Indian Ocean on the south.

In the days of Darius the Younger, the Medo-Persian empire had an enormous horse-breeding establishment in the plain near Mt. Corone. From this source alone Darius drew one hundred thousand horses to oppose the Macedonian invasion, and still left fifty thousand in the pastures which Alexander saw in his march through the country.

It would appear safe to claim therefore that there were horses in Arabia before they were sent there from Lybia. Is it not more probable that the horses of Lybia were some left in that country by Cambyses, son of Cyrus, who conquered Egypt and Lybia and Ethiopia, to add to the possessions left him by Cyrus?

The Egyptians had no cavalry, any more than had the Persians until the time of Cyrus. Horses in Egypt came after the time when the Shepherd Kings were driven out. Four hundred years after the days of Joseph, when Pharaoh pursued the Hebrews who went out with Moses through the Red Sea, we are told that he followed with 600 chariots—"all the chariots in Egypt"—according to the Bible statement. Horses were so scarce even then that each Egyptian chariot had but two horses; and all these were destroyed in the Red Sea.

And now in our day and country, certain "progressive" Americans suggest that though there may have been Arab horses, and they may have been good enough a long time ago, they are not such as would be suited to our modern conditions and American climate. The greater part of such people probably never saw an Arab horse.

In other lands the Arabian is sought after and valued at his true worth. The Hungarian Government has a stud of Arab horses at Babolna, established in 1790. In their official account of this stud, the Hungarian Department of Agriculture tells us,—“The original purpose for which the stud at Babolna was established, was that it might breed foundation stock (*animaux reproducteurs*) that could contribute a progressive element in raising the quality of its horses.”

In France the government also uses Arab blood for "raising the quality of its horses." In 1906 the Republic had 579 such animals, purebred or half-breds, in its government stud.

In Austria, the famous Lippizan horses, the oldest established breed next to the Arab, have been bred carefully to a type at Lippiza, near Trieste (from which place the breed takes its name) since that stud was established in 1585. As Austria and Hungary, however, are joined under a common ruler, Emperor Francis Joseph, most of their cavalry horses come from Hungary. Baron Slatin—brother of the famous Slatin Pasha—told the writer of these lines, in 1911: "We believe the horses bred in Hungary are the best cavalry mounts in the world. They are not too large, and have a *great proportion of Arab blood in them.*"

In the great Russian Imperial Strelnski stud, devoted to horses of Eastern blood, they had 408 breeding animals, 81 of them pure Arabs in 1889.

Italy, since the days of Giovanni de la Bande Nere, the greatest of the Medician generals, has never missed an opportunity to secure Arabian blood. Christopher Hare, in his "Romance of a Medici Warrior" tells us that Giovanni, writing to his agent Fortunati, from his camp at Pesaro, under date of April 14, 1517, says: "And besides, I am badly mounted. You must send me the best and finest Arab horses that you can get in Florence, for mine are all out of condition."

Of him Hare tells us: "In this war he would replace the heavy cavalry, the cumbrous armor, the slow massive horses which it required, by light, active Arab horses, easily managed and full of spirit, ridden by agile men lightly equipped."

We also learn that at Vaprio, "He was riding that splendid white Arab horse, Sultan—who was to survive him and never suffer another rider—and he turned his head toward the rushing torrent; the noble animal leaped into the river and swam across, his master sitting firmly on the saddle with his lance at rest."

So today also, the Italian Government secures every pure Arab they can lay hands on, having agents in the East at all times to procure them. In 1903 they had fifty-five pure Arab stallions in the Italian royal studs.

Turkey had, in 1900, four studs of horses, for producing cavalry horses, one at Schifteler (where were fifty-five purebred Arabs, eleven half-breeds, thirteen Hungarian, and eleven Russian stallions, with 600 brood mares), another at Sultan Lou, in the province of Harpoot, one at Tchon Korova, province of Adana, one at Vezirie, near Bagdad. The *raison d'être* of the last, especially, is plainly asserted: "The object of this stud is to promote the breeding of the best Arab strains."

Can it be that all these people are mistaken, and only those Americans are correct who assert that in these days Arabs are not good horses, they lack in endurance? Many great soldiers would differ with them, some in bygone days, some in our own times.

Washington rode a son of the Lindsey Arabian through our own war of Independence. Bonaparte pinned his faith to the white Arab, Marengo, that carried him through his campaigns in Egypt, and the freezing retreat from Russia. His stuffed skin is still preserved in Paris. Wellington would trust himself to nothing but an Arab horse. Kitchener and "little Bobs," Field-Marshal Lord Roberts, will ride no others. The picture of the last named famous soldier accompanying this writing is of surpassing interest.* Lord Roberts in sending the photograph, told the writer that the horse Vonolel, as he appears in the picture at the head of Queen Victoria's jubilee procession wore on his breast two medals presented to the horse by Her Majesty, one for the Afghan wars, another for his service in Africa. At the time the picture was made Vonolel was twenty-seven years old. He carried Lord Roberts for twenty-two consecutive years, through all his campaigns in Afghansitan, India, Burmah, South Africa, had covered in his campaigns 50,000 miles and never once been lame or sick. We are told that Sysonby is the greatest of all thoroughbred horses. His skeleton stands besides that of the Arab horse Nimr in the Museum of the American Society of Natural History, in New York,

Sysonby is said to have won \$170,000 for his owner, the late James R. Keene, and to have died an unbeaten race horse. Yet Sysonby reached the end of his career when *four years old*. In winning \$170,000 the total distance he ran, in all his races

*Unfortunately we were unable to reproduce this picture.

added one to the end of the other, was *twelve and one-half miles*. How does this great race horse 16.1 high, compare with Vonolel the Arab, 14.1!

The history of the XIXth Dragoons (English) who went with Kitchener to Kartoum, is familiar to all modern soldiers. They had to abandon their big English horses at Cairo, were mounted on Syrian Arabs, averaging 14.1, and these carried them nine months through the desert, sometimes for seventy hours without water, with an average loss of but twelve per cent. of the horses.

Colonel Gore of the Inniskillen Dragoons, rode a pure Arab through the whole South African campaign. It is reported that "this horse was never sick nor sorry, lasting out four picked horses which his master brought with him from Ireland."

Many other instances proving the sagacity, endurance, and soundness of these wonderful horses must be omitted that this paper go not too far beyond the limits set for its length. A single one nearer home may interest readers of *Our Dumb Animals*.

Captain Frank Tompkins, of the Eleventh Cavalry, U. S. A., Superintendent of Military instruction at Norwick University, Northfield, Vermont, tried a little Arab he has, on the thirtieth of October, 1912, over the hills of Vermont.

Having occasion to go to Fort Ethan Allen, Burlington, Captain Tompkins rode the five-year-old Arab horse Razzia fifty miles in the morning, attended to his business at Fort Ethan Allen, and rode him back to Northfield the same day. The horse carried one hundred and seventy-five pounds on his back; the entire time on the road was fifteen hours thirty minutes; and he was never distressed. The next morning he was in condition to repeat his feat. As he had no special preparation for the test, and several showers during the day made the road slippery, it would surely seem that this is the kind of horse that might contribute something useful to the breed of American horses. He would appear to measure up to the description Captain W. A. Kerr, V. C., gives to Arab horses, as animals "whose blood (no matter in what channel directed, or with what plebeian puddle mingled) has ever brought improvement in some shape or other, but mainly in respect to quality, stamina, nervous energy, ivory-like bone, tough hoof, and hereditary soundness."

THE THOROUGHBRED—THE BEST TYPE OF THE
CAVALRY HORSE.*

BY COLONEL P. M. DOBRYNIN, V. S., RUSSIAN VETERINARY CORPS.

IT is superfluous, according to my opinion, to enumerate the qualities of the thoroughbred. Who knows not his superb strength, his wonderful endurance, his splendid gaits and the gallant spirit with which he enters upon all that is demanded from him? I wish only to express my view which is shared by the majority of Russian officers.

It was supposed until the last war with Japan that the thoroughbred, in spite of his excellent qualities as a cavalry horse, had lived too long under civilized surroundings, to possess adaptability to new climatic conditions, coarse food and lack of proper care. The war, however, proved that these apprehensions were not well founded. The gallant charger bore like a gentleman, that he is, all the hardships of the campaign. He stood equally well the extremes of heat and cold. Picketted in the open in the rain he suffered no more than his humble brother—the horse of the Kirghiz steppes. As to his feed, he showed no caprice and assimilated all that was laid before him and anything eatable, in case of need, was readily accepted without his losing anything of his energy, his strength or his endurance. The only difference in this respect between the thoroughbred and the uncultured Kirghiz horse lies in the enormous amount of food needed by the former a thing easily explained by his greater size and his nervous temperament necessitating constant motion and greater combustion; likewise in cold weather his thinner skin and finer coat constituting a less warm covering, a larger bulk of material is necessary for the heating of the organism. This, however, is no drawback as the amount of work he can do far exceeds that of his common brother. Even the slowest gait—the walk of the thorough-

*From the Russian. Translator unknown.

bred, thanks to his wonderful levers, (propelling mechanism, front and rear) is incomparably faster than that of the rough smaller horse.

In former times when the cavalry, during war, had constant encounters with that of the enemy, the qualities most highly prized in a charger were his force of impact and quickness in wheeling. It was considered that this latter quality was not sufficiently developed in the thoroughbred. This might be just for the thoroughbred has been trained for centuries in moving in a straight line and acquiring the greatest speed attainable. In the present conditions of war, the cavalry performs mostly reconnoitering service in which rapidity of movement is of the highest importance and encounters with the enemy are rare, so that this defect of the thoroughbred may be left entirely out of consideration.

The only service that a thoroughbred can not perform is service in the mountains, where the native mountain horse and the mule are at home. On the steep ascents and inclines, on the trails where great boulders often constitute serious obstacles, the mountain horse is in his domain, sometimes literally crawling over the heaps of rocks.

It has been admitted by everybody in Russia that the thoroughbred is the true type of the cavalry horse. The highest price for a remount—a thoroughbred—is 650 roubles. Unfortunately, the number of thoroughbreds is limited and only the corps of officers is provided with such mounts. It must likewise be said that 650 roubles, the highest price paid for remounts, is far too small for thoroughbreds, taking into consideration the conditions in which the breeder must keep a colt for three years and a half in expensive surroundings, also that in Russia a horse stays nine months of the year in the stable and demands excellent care and liberal feeding with oats. Consequently, the best individuals do not reach the army.

THE THOROUGHBRED AS A PRODUCER OF HALF-BLOODED REMOUNTS.

In the foregoing I stated my opinion on the ideal cavalry horse which I consider the thoroughbred. The ideal half-blooded army horse must be as close as possible to his sire—the thoroughbred. The thoroughbred, developed for centuries

by careful selection, artificial training in one direction, became so typical that even the least experienced eye will recognize the thoroughbred among a hundred horses. This type is the same in Europe, in America, in a word all the world over. All climatic conditions which bring about the complete loss of the primeval type in other races (the Arab in Russia is not the Arab in Africa as may be observed at the Bielovodsk Government Studs) have but little influence upon the thoroughbred. This alone tends to show that his is the strongest race in the transmission of its personal qualities as I have had occasion to observe. He is extremely prepotent.

Having come to the conclusion that by his race and his personal qualities the thoroughbred is the ideal sire, it is necessary to consider the selection of the dams.

The cheapest way of obtaining a half-blooded horse is to mate a carefully selected sinewy, steppe mare of good temperament, with a strong thoroughbred stallion of good bone and substance, keeping the young horses on half cultivated forage allowance (oats in winter). In Russia where the steppe horse is rather small, size and bone is increased and the type is improved by first mating the steppe mare with a half-blooded stallion of excellent bone and substance, while the progeny is mated with a thoroughbred. The first progeny, sold for a higher price to the remount depots and partly for other purposes, highly encourages the owners. The Government comes to the aid of the breeders by obtaining stallions for them, placing them at their disposition often gratis, leasing lands to them at very small rent and on very favorable conditions. The Government requires, however, that no colt or fillies three years and a half old be sold to private parties before having been inspected by remount commissions. The breeding of remounts in the District of the Don is placed on the same footing and such brilliant results have been obtained there that at the Moscow Exposition of 1909, of the First Meeting of the Horse Breeders' Association the Don breeders had placed on exhibition several hundred head of such splendid remounts that the representatives of foreign powers, invited as experts, expressed their admiration as shown by a perusal of foreign literature on this subject.

The same mode of improvement of the steppe horses for remount purposes is being carried on during the latter years in the Akmoline district with the Kirghiz horse and in the Government of Tomsk in Siberia with the Altai mountain horse. This work was founded and is being finely developed by Colonel Burago, President of the First Siberian Remount Commission, a thorough connoisseur and enthusiast, whose heart in is his work. Under his zealous care and supervision a large number of studs have risen among the mountains, the steppes and the woods of Siberia, in some of which the number of dams reaches 300 head. Eight years only have elapsed since the foundation of the first stud and the improvement of the steppe horse has progressed to such an extent that in 1912 about 1,500 excellent remounts were in that region for the army.

The importation of the heavy horse took place in the Black Belt of Russia. These were mostly the Clydesdales, the Belgians, the Brabancons and Ardennes, the Percherons and some Suffolks. At the present time the Government of Poltava, Tambov, partly Orlov and Kursk are the nurseries of these draft horses. The Clydesdales were due to the demand the Moscow market for large, showy, massive horses with enormous fetlocks. The wealthy Muscovite firms chose them for their appearance and paid very high prices. With the adoption of automobiles, the demand for such horses has somewhat decreased. A horse with lighter gaits than the latter was required for agricultural purposes and preference was given to the Percheron and the Belgian. The breeding of remounts did not take root in this belt. The peasant horses, as already mentioned have acquired such substance and type that, mated with a well bred draft horse, a typical and valuable animal is obtained, selling for 800 to 1,200 roubles and more. The remount commissions do not pay such prices and therefore it is of no interest to the peasant. The gentlemen farmers of this belt alone are interested in breeding of remounts, not for gain but for their own knowledge—mating the thoroughbred stallion with a draft mare. Observations made in that connection revealed the following:

The cross with the Belgian gave very poor results, the progeny being a Belgian of the old type with sloping and cleft loins and a bad back.

The cross of the thoroughbred with the light type of Percherons gave excellent results, thanks to the energy, easy action, and fairly regular conformation. It is to be regretted, however, that the Percherons often transmits her gray coat which is undesirable for the army. The transmission of this color may be easily understood since the Percheron has a good deal of pure Arab blood and the typical color of this breed is gray. The heavy Percheron gives to heavy a horse in the first generation, more massive even than the horses required by heavy artillery, but it makes an excellent horse for agricultural work.

The cross with the Clydesdale is most interesting. The first generation is lighter than the latter, but the type of the thoroughbred can scarcely be detected and it is not available for the army on account of its massiveness. The second generation from a half-blooded mare and a thoroughbred sire is excellent, having the type of the thoroughbred, but with incomparable bone and substance, with fine gaits, the lighter type being available for the cavalry and the heavier for the artillery.

I have made a most interesting observation at the stud of General Zvegintzeff, a great admirer of the thoroughbred and the Suffolk. Such predilection for horses of opposite types seems strange, but observing carefully the better type of Suffolk, especially among the dams, a great many similarities may be seen with the thoroughbred—magnificent withers, a fine long shoulder, a strong back, superb loins, a long croup and admirable levers. What could not be reached if energy should be infused into that inert mass? This has been achieved by General Zvegintzeff by breeding the thoroughbred to Suffolk mares.

In conclusion, I would say that I consider the thoroughbred a true wealth of the nation and none ought to be allowed to leave the country. As to the thoroughbred dams they ought to be guarded and cared for for the perpetuation of only this wonderful breed, and I consider her mating with any other race a crime against this beautiful creature and her mating

with a Jack, be it for the production of a superlatively excellent mule, nothing short of a sacrilege.

NOTE:—The above article was received from Lieutenant Colonel Henry T. Allen, General Staff, with the following comment:

"This article contains some valuable suggestions as to breeding. In the matter of thin coats of the thoroughbred, it has been demonstrated on the Montana ranges that where the thoroughbred horses get the same treatment as do the other horses, they become equally hardy as the others. It is unfortunate that thus far few persons have bred thoroughbreds for any other purpose than for racing or to be sold for racing. When a systematic effort is made to produce these animals for general utility, it will be found that in all respects they will, thanks to their great intelligence and courage, equal other breeds as to temperament."

CAVALRY IN THE RUSSIAN-JAPANESE WAR.*

By F. HERSCHELMAN.

EVERY new war must be a source of manifold studies, investigations and conclusions in the sphere of military science, especially in our time, when the rapid technical and industrial progress is exercising such a great influence on the action of the armies. Many studies have been made of the Russian-Japanese War and many conclusions drawn from its experience, on cavalry action particularly, but the lately issued official description of this campaign gives a new and rich material for its study and for a detailed analysis of cavalry action. In connection with many private descriptions and statements which appeared in the private press, the official edition allows us to draw very definite conclusions on cavalry action during this war.

* Translated from a series of articles from the *Voenny Sbornik* by Captain N. K. Averill, U. S. Cavalry, Military Attaché.

It is unfortunate that we are unable to reproduce the maps that accompany this translation but it is believed that the operations can be followed by referring to the maps that can be found in any of the official reports of the Russo-Japanese War.—Editor.

Without touching the general question of the importance of cavalry in modern wars, without any theoretical discussion on the possible utilization of its service in modern battle conditions because much has already been said on this subject, I will confine my study to the development of independent activity of the cavalry during the Russian-Japanese War, to the analysis of its general tendency and to the general character of this activity, mentioning the means and ways of executing service duties only inasmuch as the material obtained will allow and as will be necessary for the aim in view.

Much has been written during the last decades on the independent action of cavalry, on the aims it has to pursue in a war, on its possible achievements, on what must and can be expected from it in the whole sphere of war operations as well as in battles, yet the practical results of these writings have been next to naught.

The American War of 1861-65 has given as example of a very extensive activity of the cavalry and all armies tried to utilize the lesson, our army perhaps more than any other. But the following wars proved that an independent activity of the cavalry remains an unattainable ideal, though the importance of this force was fully appreciated.

During the French-Prussian War of 1870-71 the German cavalry action was feeble, chiefly by reason of bad organization of its service in the sphere of high command and also by lack of fire arms.

During the Russian-Turkish War of 1877-78 our cavalry had often to execute independent action on the scene of military operations and proved to be unfit for such work, also by reason of total unpreparedness to such activity during peace time.

During the last Russian-Japanese War our cavalry had again the same problems to solve on Manchurian battlefields and proved again very feeble, though the long period of peace (since 1878) ought to have been better utilized.

However, though nothing has practically been done during the last fifty years in order to develop the activity of the cavalry in a new direction, according to new fighting conditions, the evident importance of independent cavalry work kept all military professors and writers keenly attentive to the necessity

of introducing proper reforms in the organization and training of the cavalry; an energetic propaganda of this idea went on in all European armies and in all military journals.

For a more graphic development of the subject, I find it useful to compare the activity of the cavalry during the Russian-Japanese War (negative results) with the (positive) examples of former times, for instance of our cavalry under the command of Count Roumiantzew during the Seven Years War (1758) and of the French cavalry, under Napoloen, in the Ulm period of the War of 1805; these examples will for ever remain as striking instances of model activity of cavalry on the theater of military operations.

This comparison will show the feeble points of organization as well as the reasons thereof.

I. ACTIVITY OF THE CAVALRY DURING THE RUSSIAN-JAPANESE WAR.

The Russian-Japanese War offers no sufficient instances of the developments of independent cavalry activity, notwithstanding favorable conditions for such, as open and even ground on the whole western part of the scene of action; a very profound rear of the enemy; the difficulty of supplying the army by means of only one railroad line, other ways of communication absolutely lacking; and, chiefly, a considerable superiority in number of the Russian cavalry over the Japanese cavalry. Anyhow this campaign gives examples of all kinds of cavalry work. We will examine the work of Russian cavalry, as the Japanese was numerically too feeble to do anything worth recording.

(a) *Period before the battle of Liao-yan.*

As we know, towards the middle of March our army was concentrated near Liao-yan having Kuroki's army, which landed in Corea, before our front; other armies were expected to land presumably at Daghushan, Budzevo and in the Yinkou region. Under these conditions we had to keep two vanguards: First the 9th Rifles division was posted on the line Tashichao—Yinkou, and, second the 3rd Rifles division—on the right bank of river Yalu, near Turenchen. The observation over the eastern coast of the Liau-tung peninsula from Budzevo to

the mouth of Yalu was entrusted to the Transbaikalian Cossacks brigade under General Mischenko; and over the western coast—to the Ussuri cavalry brigade, posted near Haidju and Senuchen.

The Transbaikalian Cossack brigade of General Mischenko reinforced by a third regiment, left one regiment for watching the coast, and with the rest, the regiments of Chitinsky and Argunsky, with a six gun horse battery invaded Corea, intending to reconnoiter Kuroki's army, which landed on the Korean shores. Two strong patrols were sent in advance; four days later the vanguard advanced, three sotnias; then followed the rest of the brigade, ten days after the departure of the patrols. Certainly this extension of the detachment in depth was not a well combined movement. The vanguard parts, unprotected, could not do any good work; they had to be content with what information they obtained from local population, very unreliable of course. The progress was slow; penetrating to a distance of 150 versts from the border, the vanguard sotnias could however learn nothing on the enemy's movements. Local conditions also impeded the scouting: the left flank of the Japanese was protected by the sea, their right was lost in a hilly country, with no roads, not even paths. Moreover, the scouting action of the detachment was impeded by the instructions received. General Lenevitch sent orders to "spare our cavalry and not allow its dispersion from the very beginning of the campaign," and General Kuropatkin simply called the detachment back to Ychju.

Supporting the vanguard sotnias, General Mischenko's main forces advanced as far as Parchen, but having come in touch with the enemy, remained inert and then, apprehending a surprise in its unprotected rear, retreated.

In their advance north the Japanese progressively occupied the lines of rivers Taidonchan, Chinghanchan and Pakchenchan by dense infantry reinforced patrols, so that our Cossacks could not penetrate the region of movement of the main forces either on the flanks, or from the front. Seeing the impossibility of secret scouting and having received from the Imperial Lieutenant Admiral Alexeiw an order to proceed decisively, General Mischenko executed an energetic reconnaissance, advanced

to Chinchjou, on the presumed line of march of the Japanese, where their cavalry vanguard was reported to have halted, and found there only some feeble vanguard detachments of infantry. After an useless firing on both sides, losing three officers and fifteen Cossacks, the detachment, seeing that the enemy received reinforcements, retired with very poor information.

Having penetrated almost as far as Penian, Mischenko's detachment could only ascertain the general direction of the enemy's advance toward the south of river Yalu and had to return thus putting an end to this expedition; soon after, General Kuropatkin ordered this brigade to occupy the right bank of the Yalu.

In general the scouting gave poor results as to the number of troops landed and the direction they took; information was obtained almost exclusively through spies, or from inhabitants, and gave no proper knowledge of the disposition of the enemy's troops in Korea; yet, this detachment could have obtained better and fuller details, if it had not been called back just when its work in Korea was most needed. On the 20th of March the brigade crossed the river, losing connection with the Japanese; then it was quite uselessly sent to the right flank of our forces and therefore could not, at the right moment, watch and oppose the Japanese outflanking movement of the left side of our position in the Turenchen battle.

The work of General Mischenko's brigade in Korea was cavalry work in front of the army at a distance of 150-200 versts, which is a sufficient advance; but being very much dispersed in depth, the brigade could not well support its advance parts, the action was very poor; besides, every independent impulse was checked by the retreat movement of the main forces. All that influenced the brigade's work and made it dull and without result.

During the Turenchen battle, the cavalry remained on the right flank of the infantry battle disposition and took no part in the fight which went on chiefly on the left side.

Towards the end of April a small cavalry detachment under Lieutenant Colonel Madritov, made a little diversion in the rear of Kuroki's army near Anju, destroyed stores, attacked

patrols, tried to obstruct the enemy's communication line, but was finally repelled; being numerically too feeble (200 Cossacks and 2 scouting parties), it could do no good; and as towards that time the communication line was transferred to Antung the Korean region lost its importance.

After the battle of Turenchen, this so-called, Eastern detachment moved back to Fynhuanchen and further to the mountain passes Fynhuanchen and Moduln. General Mischenko's cavalry with three infantry battalions protected its right flank and the direction line Daghushan—Suan-Haichen, as a possibility of Japanese troops landing near Daghushan was in view; the detachment, 1,000 horsemen and 2,000 rifles, had to watch over a protection line of 80 versts in length and keep close observation of the sea coast.

The cavalry detachment of General Renenkampf (twenty sotnias, twelve guns and three battalions of infantry as protection) protected the left flank of General Mischenko's detachment and watched over the line Fynhuanchen—Saimatzy—Mukden, thus protecting the left flank of the region of concentration of the main army.

The Laohe detachment (ten sotnias, eight guns and one and one-half battalion infantry) had to protect the right flank of the concentration region in the valley of river Laohe.

Most writers of records of this war state that cavalry scouting was insufficient and gave little useful information. As to independent action, with the aim of impeding the enemy's advance, there was none during this period of the campaign.

In the first days of May, the Manchurian army had completed its concentration; the main forces camped in the vicinity of Liao-yan, protected by the First Siberian corps (south) and the Eastern detachment (east). The vanguards of the First Siberian corps occupied the line Yin-kou—Tashichao—Dalin Pass—Pkanlin Pass, an extension of 120 versts. The vanguards of the Eastern detachment occupied the passes Fenshulin 2d—Modulin—Fynssaolin, on an extension of 210 versts. In front of this long vanguard line were posted the cavalry detachment of General Samsonov (Primorsky dragoons) a scouting company and six guns with several border guard sotnias and, later, the Eighth Siberian Cossack regiment near Sunechan;

the cavalry detachment of General Mischenko (nine sotnias and six guns) near Djandjapoodza, on the left flank of the Southern vanguard; the cavalry detachment of General Rennenkampf (fourteen and one-half sotnias and six guns) near Saimadzy.

Thus, in the expectation of the advance of the enemy, our cavalry (forty-four sotnias) was protecting the strategic front of the army on an extensive line of over 200 versts and engaged exclusively in scouting and in watching the expected landing of the Japanese. Although executed constantly, by small patrols and strong detachments, the reconnoitering during this period of the war gave very poor results. General Kuropatkin several times had to send to the chief of his staff orders for more energetic scouting, as he wanted information of the enemy's main forces and not only of their vanguards.

After the landing of the Japanese near Budzevo, the fate of Port Arthur caused much apprehension and the intention of sending help there. Leaving a strong block in front of Kuroki's army (east), the First Siberian corps and a brigade of the 35th Infantry Division, under General Baron Stakelberg, moved off south.

Whilst this detachment was preparing to depart, General Samsonov's cavalry, being forty versts ahead of the front line, had constantly skirmishes with the cavalry brigade of General Akiyama near Wa-fan-gou; yet no real scouting in the enemy's rear was executed, notwithstanding General Kuropatkin's order.

On the 25th of May, the cavalry detachment sent out to Vafandian was enforced to fifteen sotnias, General Simonov (just arrived) commanding. An infantry brigade was, on the 28th of May, sent to Vafandian for support of the cavalry detachment, the army corps, preparing to depart south, was in the mean time forming (under their protection) in Wa-fan-gou.

But on the 31st of May Oku's army took the offensive, pushed off the vanguard, sent two divisions to our front and a third to outflank our right flank, General Akiyama's cavalry with one battalion as support, protecting the Japanese right flank.

The open advance of two Japanese divisions was easily perceived by our cavalry, but the movement of the outflanking column was noticed only on the 31st of May, and a report of the advance of an infantry brigade with cavalry to Fudjow was made on that day. However, later the Russians seem to have lost sight of it and no further information came, although this Japanese detachment passed the night of the 1st of June near Tendiatum, at a distance of three versts from our advanced outposts at Chudiakow. This may be explained by the fact that the scouting was directed chiefly to the east, watching the advance of the main detachment, to meet which General Stakelberg prepared himself on the fortified position of Wa-fan-gou.

General Samonov's cavalry, fifteen squadrons with six guns, approached near the right flank of the position and was ordered to protect the same. Mounted reinforced patrols protected the left flank.

On the 1st of June the Japanese developed their front line before our position and executed reconnoitering. They decided to outflank our right flank, but sent at the same time a brigade against our left, where a hot fight took place that day.

On the 2d of June Baron Stakelberg intended to make an offensive advance, encircling the right flank of the enemy, but General Oku outwitted him and attacked the Russians, outflanking their right flank.

Our cavalry instead of being constantly hanging on the Japanese left flank and executing extensive scouting, obedient literally to the disposition given, went off north too soon and shut itself up in the hilly, stone-stack of Lunkoo. In the evening of the 1st of June the cavalry received orders to make a reconnaissance on the left flank and rear of the enemy, but put off the execution until the next morning and went two versts back north for the night's rest. Misunderstanding in the action of the cavalry is explained by the illness of its chief, General Simonov and the great strain and exhaustion of the two weeks service in constant touch with the enemy. Only on the 2d of June, towards night General Samsonov arrived and took the command.

On the 2d of June the cavalry moved ahead and early in the morning, intending to scout on the flank and rear of the enemy,

but was fired at from a wood south from Tafanshin. Part of the cavalry dismounted and began firing also; having ascertained the presence of considerable forces, the scouting detachment withdrew to Loonko, from which place they continued to watch the enemy and sent a report of the outflanking movement which the Japanese were executing. At 10:00 A. M., the detachment noticed that a fresh Japanese brigade appeared near Loonko from the west, from Fuchjow; thus the enemy succeeded in executing the planned outflanking movement perfectly hidden until they reached Loonko. The cavalry detachment retreated towards the main forces and discovered Japanese infantry forces approaching the rear of our position on the railroad line. Upon receiving this information, Baron Stakelberg ordered a retreat movement.

In the action of our cavalry in the Wa-fan-gou battle, we must mention first of all, the unsatisfactory reconnoitering, which did not detect in time the outflanking movement of the Japanese and allowed them to encircle our troops; the cause of it was, *First*, the posting of the cavalry too near to the position of the main detachment on its flank, behind the flank of the infantry, instead of being in front of the latter; *Second*, an unsufficient reconnoitering, bearing only on one side, instead of clearing the locality on all sides from the main detachment; and, *Third*, their whole attention was directed towards the advancing enemy's troops, the fighting units, instead of having a watchful eye on the reserve parts, posted behind, which certainly could have been expected to execute some operation on the sly. The fighting units were operating so that the adversary could always see their movements; therefore, their scouting should have had for its object the enemy's flanks and rear. During the enemy's advance, the cavalry, retreating, lost touch with him and received no further information; moreover, on discovering the said outflanking movement instead of trying to impede the same, stop it, even for a short time, by an attack on the flank or dismounted on its front, the cavalry retreated under the plea of an intention to protect the battle order of the main detachment.

In the meantime the cavalry detachment of General Mischenko, posted much in advance on the road to Daghushan

and (reënforced by the Seventh Siberian regiment) counting seventeen sotnias, three battalions and four guns reconnoitred between Suan and Daghushan, where on the 17th of May the Fourth Japanese army (Nodzu) began landing. When this army, backed by a brigade of Kuroki's army, began advancing towards the south flank of Baron Stakelberg's detachment, after some skirmishing near Suan, Mischenko's detachment was obliged to leave this point. In the last days of May, Mischenko's detachment, enforced again by a brigade of the Orenburg Cossacks, moved off to the road to Haichow, for the protection of this line. The information supplied by the detachment during this period was very poor and not definite.

Cavalry detachments of General Rennenkampf and Colonel Kartzev continued protecting the left flank of the Eastern detachment and the road to Mukden, continually scouting on their respective fronts. Yet, General Count Keller, the Chief of the Eastern detachment, was complaining of insufficient information procured by the cavalry, though the same did nothing but reconnoiter.

The success of the Japanese at Wa-fan-gou opened the way for a further advance as well on the southern and eastern front. Oku advanced immediately to Sunenchen, followed by Kuroki and Nodzu; towards the middle of June they occupied the passes on Fenshulin crest, which the Russians left without fighting. Then the Japanese continued their concentration on Liao-yan and, after the battle near Tashichao with a group of our southern army corps, and a series of persistent fights on the whole eastern front they advanced to Liao-Yan, which the Russians had fortified. Our cavalry protected the rear of the troops, clearing their advanced positions and gathering on the main one. During this period the cavalry detachments of Mischenko, Rennenkampf and Samsonov, backed by infantry parts, had constant skirmishes with the enemy, executed scouting on the army front, but were unable to penetrate through the outposts lines of the Japanese and therefore gave only poor information as to the situation of the enemy's forces.

During the battle of Tashichao the Russian cavalry protected the flanks of Russian positions, but took no active part in the fight.

After the concentration of the Russian army on the Liaoyan battlefield and fortified position, cavalry detachments were posted on the right flank. General Mischenko with twenty-one sotnias, twelve guns and two battalions, occupied the village of Uluntay; General Samsonov, with nineteen sotnias and six guns, was ordered to the general reserve and posted behind the outer right flank of the position. General Grekov, with one battalion, fourteen sotnias and twelve guns, was to keep distant watch on the flank from the right bank of river Taitzykhe; General Kossagovsky with six battalions, nine sotnias and sixteen guns had to watch over the river Laoke.

On the left flank of the Russian army Prince Orbeliani with two battalions, eleven sotnias, two machine guns and fourteen guns, had the nearest watch; Colonel Romashevsky, with one infantry regiment and one battery, was stationed in the village of Bensihoo; General Lubavin, with seventeen sotnias and four guns, observed the river Taitzykhe from Sakang to Siaossyr.

General Mischenko had not yet reached the place he was to occupy (Uluntay), when on the 17th of August, in the morning, the Japanese cavalry of Akiyama, followed by infantry, encircled the right flank of the First Siberian corps. Mischenko's detachment, under the fire of the Japanese cavalry, occupied Tanchuandzy and, dismounting, began fighting; soon the Ural brigade arrived and reinforced the detachment to twenty-four sotnias with twenty-four guns.

On the left flank the crossing of Japanese main forces to the right river bank was perceived in due time by patrols of the Niejin dragoons; but, at the first news of the Japanese crossing the river near Sakan, the Commander ordered Colonel Romashevsky's detachment to leave in Bensihoo only the cavalry and move to the north in the direction of Mukden for the protection of the roads. General Lubavin with eight sotnias and four guns occupied Bensihoo, posting two sotnias along the river. When the Japanese began executing the crossing, on the 17th opposite Bensihoo, General Lubavin moved off to the north, Sanshantzy, reporting from there the advance of important Japanese forces crossing the river, though General Bilderling explicitly ordered him to attack the crossing troops from

the rear. Thus this important point (Bensihoo) was left bare at first by the infantry, then by cavalry also, just at a moment when the presence of our protecting troops on this shore was most necessary; so, the cavalry did not properly execute the watching duty.

Finally, we must state, that the big cavalry detachments, backed by infantry units, which had to protect both flanks of the army, executed only poor work, as well in watching the enemy's movements, as in impeding his encircling our main forces.

As to the right flank cavalry, would it not have been more useful instead of dismounting and opening a resultless feeble fire on the front, to execute a mighty attack with twenty-one sotnias on horse back in the rear flank of the enemy, which would have had many chances of success?

General Lubavin, with his seventeen sotnias, could also have done more than ride off to the main forces and report that the Japanese are crossing the river. This might have been done by some small patrol parties; a big detachment should have done better work.

On the 18th of August violent attacks of the Japanese on the whole front of our army were renewed. They were all repelled. General Mischenko tried an attack near Tanchuantzy and later near Uluntay, but had no success; anyhow, he made a diversion and somewhat eased the First Siberian corps, that was hard pressed by the enemy.

In the meantime during the night of the 18th, a part of Kuroki's army crossed the river Taitzyhe and the crossing continued during the following day. Our troops made no active effort to impede this crossing and on the 19th Kuroki himself began an offensive movement on the right bank of the Taitzyhe.

With the first tidings of the crossing, General Samsonov's detachment was moved from Liao-Yan to the Yentai mines, for the protection of the left flank of the Seventeenth Army Corps and of the Mukden road. The 54th Division of General Orlov received also orders to move in the same direction; Prince Orbeliani's brigade kept posted south from the mines, protecting the nearest flank of the 17th Corps. General Kuropatkin, intending to block the Japanese on the south front whilst he will attack Kuroki's main forces, ordered that General

Zarubaew's two corps should defend the main Liao-yan position, and the other four corps should develop on the right bank of Taitzyhe, on the line Yentai—Sykvantun, and attack Kuroki's troops. General Orlov's 54th Division was to protect the left flank of this detachment and advance to Kvankufen. General Samsonov's detachment was to scout in the direction of Ben-sihoo; General Mischenko's detachment remained in reserve behind the right flank.

On the 19th and 20th a violent fight took place on the right river bank between the 17th Army Corps and General Orlov's division on one side and Kuroki's troops on the other; other troops, in the meanwhile, crossed the river and joined in the rear. General Orlov's attack was a failure and his division turned back in disorder. General Samsonov, posted on the left flank of this division, seeing the retreat and appreciating the importance of the Yentai position occupied the same by dismounted men of his detachment and succeeded in repelling the adversary during the whole day.

General Mischenko's detachment advanced nearer to the left flank but received General Kuropatkin's order to establish connection between the 17th and the First Siberian Corps. This was the whole action of a detachment of nineteen sotnias with twelve guns in this fight.

On the 21st General Samsonov's detachment protected the left flank of the army, and Mischenko's detachment continued to maintain connection between the army corps.

In this case General Samsonov's actions show an independent activity of our cavalry corresponding to the general situation; they contributed in a large measure to atone for the consequences of the unlucky retreat of General Orlov's division. General Mischenko's detachment remained inactive during the last two days; the order received (to keep connection service between the two army corps in battle order) was not in proportion to the numerical strength of this detachment, nor to the real destination of cavalry. The concentration of thirty-eight sotnias horsemen on our left flank did not prompt this mass to any active part. The losses were three officers and fifty-four men.

General Lubavin's detachment of four battalions, eighteen sotnias and twelve guns, had a conflict with the vanguard of Umesava, who crossed the river near Bensihoo and retreated to the North, even though Umesava, leaving only one battalion as shield turned with the rest of his detachment to west towards the Yentai mines.

During the above described period of the Russian-Japanese War, the Russian cavalry was constantly employed for scouting and protecting the strategic army front; therefore, it had always to be in advance and was spread over a large front.

In May, our cavalry, thirty-seven sotnias, had to cover a front of more than 200 versts in extent; being, by 100 squadrons, superior to the Japanese cavalry, it could execute independent work, but receiving constantly binding orders for action, the chiefs could not display their own initiative. This wrong organization led to the passivity which marks the action of our cavalry throughout this war. Reconnoitering is made only on the front, no thorough scouting in the region of the enemy's concentration. Poor information obtained from suspicious sources (Chinamen) gave no proper ideas on the enemy's movements and led to an exaggeration of his forces. In general, the scouting was highly unsatisfactory.

Neither the difficult conditions of locality, nor the exhaustion in a six months constant work, can excuse or explain the passive character of such cavalry work. Similar conditions are repeated almost in every war, yet they generally are surmounted in some way or other.

In the great conflicts of this war (Turenchen, Wa-fan-gou, Tashichao, Liao-yan) we find the same passiveness; the cavalry is occupied exclusively in protecting flanks and watching; moreover, its disposition is generally wrong, either too near to the respective positions so as to be unable to detect an outflanking movement, or on the same line as the infantry; with the development of the outflanking movement the cavalry moves back, leaving room to the infantry, taking no active measures to impede the enemy's advance; sometimes, several sotnias dismount and open rifle fire, then remount and move off.

Only in the Liao-Yan fight was this proceedure followed corresponding to circumstances, viz., the Yentai mines had absolutely to be saved; General Samsonov's horsemen dismounted, occupied this important position and held firm during a whole day. But we see no attacks on horseback on outflanking troops, nor violent firing at them from the rear at the decisive moment in a word, no brilliant action.

(b) *Period of the Sha-Ho Fights.*

After the retreat from Liao-yan to Mukden the Russian army took the following disposition: Six army corps were posted on the right bank of the river Hoonhe; two corps (10th and 2d Siberian) protecting the main forces, remained on the left bank, the 10th in front of Mukden, the 2d near Fanshen, on the road between Bensihoo and Fooshoon, protecting the left flank of the army.

The front vanguards were posted on the line Kuanlipoo—Linshinpoo Midia—Tendzaio. In front, at a distance of about ten versts, was extended a dense cavalry screen from Chau-guanpoo to river Hoonhe, through Shilihe and further to the east, the road from Fooshoon to the Dalin pass; on the right flank stood General Grekov's detachment, then General Mischenko's, General Samsonov's and General Rennenkampf's; the front of this cavalry screen extending about eighty versts.

The Japanese army centered on the line Liao-yan—Yentai mines—Vaniapooza; its vanguards were just in front of our cavalry; seven cavalry regiments, one regiment infantry and three battalions occupied the left flank of the Japanese disposition, between Tootaidzy and Tadusampu; the Japanese line of advanced posts extended from Vaniapooza to Sandespoo (at a distance of two to three versts in front of ours); the main forces of both armies were separated by a distance of forty versts.

During four weeks both armies were absolutely inactive; it was a forced rest after the great strain of the Liao-yan days; munition stores were renewed, order was reorganized, fresh reinforcements arrived. Both armies stood face to face, as stated above; our whole cavalry was pressed into the narrow passage of two to three versts distance between them and had

no space for moving, not even for executing proper scouting, which required time and free space. It was doomed to passivity to a mere screening on a front of eighty versts in length, which could have been done much better by the infantry, especially because the locality was very hilly to east of the railway, on the greater part of the front.

The Japanese cavalry (General Akiyama) was, in consideration of this circumstance, concentrated on the left flank of its army, on an even open space between the river Scha-Ho and Hoonhe.

Thus, we must not wonder that our cavalry displayed no activity having no space free for action.

On the 3d and 4th of September the Commander-in-Chief, desirous to verify the information received by him of an increase of the enemy's forces on a point to the east of the railway, ordered that a scouting in force be made in the region of station Yentai—Vaniapooza, at the junction of the roads leading to Mukden and Fooshun.

General Mischenko moved off in the direction of Yentai with eight sotnias and four guns. The Japanese outposts retreated, but, on approaching the station Yentai, our vanguard was violently fired on and turned back; one scouting party, approaching the station to a distance of 500 yards, found out that it was occupied by only two companies of infantry and a small number of horsemen; but, it being already dark, the main forces of the detachment did not attack. General Mischenko limited the hostilities to a heavy gun and rifle firing. The villages around the station showed no trace of the enemy.

General Rennenkampf's detachment made a scouting raid with eight sotnias, twelve guns and four battalions in the region of Vaniapooza near Fanshen, pushed off the Japanese outposts, occupied the heights near Fanshen and opened fire, the Japanese answering.

At the same time General Samsonov's detachment of five sotnias, scouts and two guns, going from Fandiapoo to the east by mountain roads, occupied the village of Tzoghov (four versts distance from Vaniapooza to the north) and also opened fire.

At 2:00 P. M., General Rennenkampf, being satisfied with the results of his scouting, left his position and retreated;

General Samsonov did the same. Our losses were one officer and twelve soldiers, this reconnaissance proved that the Japanese had strongly fortified the position near Vaniapooza and had occupied it by a brigade of infantry with twelve guns, receiving later a reinforcement of about 500 men; more troops joined these forces on the 5th of September.

Thus, says the official edition "Russian Japanese War," the scouting operations did not sufficiently clear the circumstances of the enemy's massing his troops to the east of the railway; the nearest region, near station Yentai, was occupied very feebly, although it being a very important concentration point of several railway lines, it could be presumed that a considerable part of Kuroki's army would be grouped there. The scouting discovered only the vanguard posts of the enemy at the station and a small detachment at Vaniapooza; the troops to the east of the railway, their quantity, their position had not been ascertained.

It must be presumed that General Kuropatkin, sending out three detachments for a reconnaissance in force, expected better results; the scouting was made from the front, examined only points which have been indicated as occupied by the enemy and made no attempts to outflank these positions and examine their rear. The detachments utilized their forces only for pushing off the advanced outposts and sending them back to their nearest supports and nothing more. That was very little work for three cavalry detachments with eighteen guns; they ought to have further penetrated the enemy's position, provoked an attack, which should have disclosed the enemy's forces on this point, and contrived to see as much as possible. Limiting the scouting to one day it was perhaps difficult to achieve more, but there was no necessity for such haste; moreover, the loss of only fourteen men proves also that the work was not very extensive, nor daring.

Later in September the Russian headquarters decided to execute an advance movement and attack the Japanese in their positions, first of all occupying the right bank of river Taitzyhe. This movement was executed by two groups.

(a) The Western detachment under command of General Baron Bilderling, 10th and 17th army corps, a Cossack divi-

sion (64 battalions, 184 guns, 40 squadrons, 6 horse-artillery guns), was to advance along the river Scha-Ho in a straight direction to the south, on both sides of the railway track; this movement was to have a demonstrative character, in order to attract the enemy's attention.

(b) The Eastern detachment of General Baron Stackelberg, 1st, 2d and 3d, Siberian corps, General Samsonovs' cavalry detachment, a Cossack division and parts of the Fifth Siberian corps (73 battalions, 130 guns, 16 mountain guns, 6 mortars, 34 squadrons, 12 horse-artillery guns), was to turn the right flank of the Japanese army in the direction of Bensihoō and attack the enemy along the river Taitzyhe.

The general reserve, First Army Corps and Fourth Siberian (76 battalion, 222 guns, 9 sotnias) under the command of General Zarubaew, was to follow at a 20 versts distance from the interval between both detachments.

General Mischenko's detachment of eleven sotnias, and eight mountain guns was to keep connection between both groups and protect the interval, advancing in the direction of the Yentai mines.

The protection of the flanks was entrusted; on the right to General Dombrovsky, with thirteen battalions, thirty-two guns and eleven sotnias and General Kossaghovsky with six battalions, twelve guns and nine sotnias; the latter had to protect the extreme right flank along the river Laohe; on the left flank to General Rennenkampf with thirteen battalions, thirty guns and sixteen sotnias in the direction of Dalin, and to Colonel Madritov with one battalion, two sotnias and two guns.

Thus the decisive blow was to be delivered at the right flank of the enemy and the success of the whole operation depended upon the success of the east detachment's action.

Here we must note first of all that the distribution of the cavalry between the detachments did not correspond to local conditions. The east detachment had thirty-four squadrons, although it had to work in a hilly country, accessible only along the roads and the valleys of mountain rivulets where the presence of such a cavalry mass was only an encumbrance and an embarrassment. On the contrary, the western part of the Scha-Ho region, where the west detachment had to operate, has an even

and open character, where operations in masses had the necessary space for action. If the mass of our cavalry had been concentrated there, it certainly could have executed the task assigned with the greatest success.

Shortly before the beginning of this advance operation, on the 21st of September, General Mischenko's detachment of twelve sotnias and four guns executed a reconnaissance in force in the direction of the Yentai mines; after some firing at small advanced outposts, the detachment advanced to a distance of five versts from the mines, discovering on the whole space near the latter only four squadrons and three companies. This led General Mischenko to report that the east detachment would, in the whole region of its advance, meet with no serious resistance. However, the information, obtained by the east detachment's scouts, was very different stating that the Vaniapooza region was already occupied by strong Japanese detachments. This contradiction is by itself an indication of insufficient and unreliable scouting, and the necessity of executing anew a whole series of reconnaissances before advancing further, which caused a delay, proves it undeniably.

The east detachment moved off on the 21st of September in three columns; the right, First Siberian Army Corps and part of the Second, went in the direction of Vaniapooza; the middle, Third Siberian Army Corps, to Impan-Kaotaitzy; the left General Rennenkampf's cavalry and General Ekk's mixed infantry division, to Bensihoo.

Thus the columns were to encircle the Japanese positions of Vaniapooza from the right flank, eastwards, the left column appearing in their rear, from Bensihoo; at the same time part of the cavalry was across the river Taitzyhe and to operate on its left bank.

In this advance movement General Rennenkampf's cavalry formed the left column of the eastern detachment, and general Grekov's cavalry detachment continued scouting on the front Saliuhetzy—Vaniapooza, in order "to study the approaches to the position Vaniapooza—Nanshanpooza and keep connection with the cavalry of the west detachment."

General Samsonov's cavalry detachment scouted in the locality between Huanlin—Chaohuanzai; having for its object

"to find out roads in the western direction, towards the line Vaniapooza—Sanchanzy, and secure connection with General Rennenkampf's detachment." Later he received the order to "advance towards Shapintaitzy, and to scout between this point and Bensihoo, keeping connection with the neighboring detachment and protecting their flanks."

On the 22d and 23d of September a new reconnaissance of the Vaniapooza positions was made, causing only loss of time to the enemy's profit.

Thus, during this advance operation, the cavalry was in front and had to execute scouting work.

The same object, scouting, was given to the cavalry on the following days, viz: General Samsonov's detachment had to move towards Bensihoo and execute scouting to the south, southeast and southwest; General Rennenkampf was to protect the left flank of the whole detachment and execute scouting to south and southeast.

When we remember that at the moment of starting the adversaries were separated by an interval of only forty versts, it is presumable that on the next day they ought to have come to a conflict. There was no time for the cavalry to be preceding the army and to be scouting, especially in mountains; there was neither time nor space for such activity; moreover, always remaining in front, the cavalry was constantly entangled in battle actions of its own infantry, the scouting work passing to the divisional cavalry and to infantry scouts. The general scouting task entrusted to the cavalry, could not be executed simply by reason of lack of time; it was already too late at this period of action; reconnoitering should have been done during the four preceding weeks, when the enemy's troops stood still in expectation.

Such inadequate employment seems to indicate that the commander did not know what to do with the cavalry, how to employ it.

On the 24th of September along the whole front our troops came in contact with the enemy; skirmishes began; the Japanese left the Vaniapooza positions without fighting and concentrated the defence on the mountain crest, encircling Ben-

sihoo from north and east; fighting went on over the whole front, and the cavalry, dismounting, fought with the infantry.

On the 28th General Samsonov's cavalry detachment twelve sotnias, one battalion, and one battery, was ordered on the left flank for action against the rear and flank of the Japanese, from the left bank of the Taitzyhe, to help the troops fighting on the front. This was fully corresponding to the conditions of the fight, only it should have been done sooner.

General Rennenkampf's column, thirteen battalions, and sixteen sotnias, was directed to support the attack on the mountain passes on the front and to keep menacing watch on the rear of the Japanese troops near Bensihoo.

Yet these were only attempts at action in the enemy's rear; no serious intention of executing an outflanking march and help the frontal attack by a violent blow direct at Bensihoo in the rear, seems to have existed; at least, when General Rennenkampf proposed to execute such a movement, the commander of the third Siberian army corps, to whom he was subordinated refused to sanction this plan; an outflanking march was thought to be too risky in view of the proximity of the enemy's positions, and General Samsonov was ordered only to secure the river crossings and to scout towards the south and along river Taitzyhe, helping the detachment of General Lubavin, who was operating with five sotnias, on the flank of the Japanese positions, again a half measure.

The Lubavin detachment occupied at first an advantageous situation, having the enemy's position, his pontoon bridges and even his rear under gun and rifle fire; however, the Japanese forced him to move back. General Samsonov tried to support him, reënforced him by 700 horsemen, stopped the Japanese attack, but could not help him to regain the first position and Lubavin was limited to gun action only against the flanks, not the rear of the enemy. The latter contrived to send support to his companies, posted on the left bank, by others which crossed the river in haste and thus they impeded the advance of the Cossacks. Towards evening it was reported that a Japanese detachment of all arms was moving on thirteen versts south. On the 29th of September on the flank of Lubavin's detachment appeared the second Japanese Cavalry brigade of

Prince Kanin, which opened a violent fire at the Cossacks from the rear.

This caused General Samsonov to lead the whole detachment back, to the bridges, and later on to the right shore of the Taitzyhe; but the Japanese battery took General Rennenkampf's detachment in flank and forced it to move back also.

During these two days (28th and 29th) the Russians had a series of bloody and resultless fights on the front, attacking the passes to the east of Bensihoo, and towards the evening of the 29th it became evident that the planned aggressive advance had turned to mere defensive actions and on some points even to retreats. Finally the east detachment, numbering 86 battalions, 50 sotnias, 198 guns, thus being numerically much stronger, proved unable to crush the enemy numbering only 19 battalions, 12 squadrons, and 48 guns.

In the meanwhile the west detachment advanced (on the 23d of September) his main forces to the river Scha-Ho, sent advanced outposts six to seven versts ahead to the river Shiliho and waited during two days for news from the east detachment; on the 26th the detachment received orders to move on and occupy the line of the river Shiliho, which was executed after a fight with the advanced outposts of the Japanese.

This detachment advanced in two columns: the right (17th army corps) to the west of the railway; the left (10th army corps) to the east of the track. General Grekov's Cossack division advanced on the right flank, between the railway and Hoonhe; the Ural Cossack brigade protected the front of the 10th army corps.

Apprehending that the Japanese may tear through between the west and the east detachments, General Kuropatkin sent to fill the interval, from the general reserve, the 4th Siberian corps of General Zarubaew with the cavalry detachment under General Mischenko. These troops formed the middle group.

In the general reserve remained the first army corps, behind the center of the main army and the Sixth Siberian, behind the right flank.

The Fifth Siberian corps, under General Dembovsky protected the right flank in the Hoonhe valley, on the right bank of which was posted the horse brigade of Prince Orbeliani.

Thus again here also, our cavalry was extended on the whole front line.

Having received information of the arrangement of our forces, Marshal Oyama decided to execute a counter attack and, leaving the right flank troops at Bensihoo to their own forces, directed his whole army against the west detachment to strike a heavy blow at the center of our positions, in the interval between the two groups of our advancing troops, as the feeblest point, at the same time attacking the right flank by an encircling movement. Therefore he sent two divisions of Kuroki's army and Nodzu's army against General Zarubaew's troops. Oku's army was sent along the Mandarin road.

On the 27th of September the Japanese army began advancing and on the next day there was violent fighting along the whole front. Almost without interruption battle after battle lasted until the 3d of October, but nothing could move away our valorous troops and they kept their positions on the Seha-Ho to the last. Skirmishes went on until the 6th of October along the front and then began the cessation of hostilities for the winter.

During the cavalry actions on the front of the west detachment, General Mischenko's cavalry detachment also had to operate in mountains, where like the cavalry of the eastern detachment, he could not develop his activity freely. He had to protect infantry flanks, to secure connection between the columns, to executing small scouting in the sphere of action of the infantry, always having some specially commanded infantry companies, following, impeding and slackening the cavalry action. This limited the service of General Mischenko's cavalry to a close dependance on the infantry action in dismounted formation, fighting on foot against the enemy's infantry; such an activity is not even a divisional cavalry service, as the latter has not for its special character to fight in dismounted formation together with infantry.

The cavalry detachments of General Grekov, Colonel Stakhovich, Prince Orbeliani and the Ural Cossack brigade

were in better condition as they had to work in a plain open terrain and therefore could freely develop their special cavalry activity. But these detachments also received first of all inadequate orders. Thus General Grekov's detachment had to "watch on the front to the west, from the Scha-ho to Hoonhe and protect the flank." The Ural Cossack brigade: "to watch and execute scouting along the front," duties of an exclusively passive character, a kind of sentry service that caused this mass of cavalry to be loitering about between the infantry and sometimes to do some firing in dismounted formation in common with some infantry unit, instead of largely executing independent and special cavalry work. Having no special chief, this mass was not united under one commander and was nothing else but a lot of single detachments; no wonder if its activity had no proper general aim.

This great blunder—to have pressed our cavalry in a narrow space between both armies—was a sacrifice of our 102 sot-nias to inadequate work of small scouting, foot fighting, connection service, and flank protection; the marked superiority over the Japanese cavalry proved of no avail; on the left flank, at the news of the approach of Prince Kanin's detachment, our cavalry moves off to the bridges, bares Rennenkampff's flank; crosses the Tiatzyhe and abandons an advantageous situation near Bensihoo from which it could paralyze the flank and rear of the enemy; on the right flank Grekov's and Stakovich's detachments were paralyzed by Akiyama's cavalry, whilst the rest of our cavalry detachments could not move at all and was doing infantry work. Then why have horses? During the whole two weeks period of constant fighting our cavalry had losses of one officer and fifteen soldiers only, on the average per regiment.

Attacks of the Russian Cavalry on the Rear of the Enemy.

The cessation of hostilities which took place on the theater of war after the battles on the Scha-Ho, while our troops were awaiting the arrival of reinforcements from Russia, continued until January, 1905, and was only broken sometimes by small encounters among the scouting parties. The Japanese were using all their efforts against Port Arthur, intending after the

fall of that fortress to move the army of Nogi to the north, so as to attain the numerical superiority necessary to them for active operations. The proximity of both armies created collisions at the advanced posts and, when searching for small detachments of volunteer scouts, these were nearly of daily occurrence.

After the battles on the Scha-Ho the exhausted combatant parties did not carry out any active operations for some time, but busied themselves with the reënforcing of their positions and remained near each other at a distance of some hundred paces. In such a position the cavalry was useless at the front and the idea arose to use it on the flanks. During the period of inaction the line Haitchou—Tashitchaou—Haitchen—Layon served for the transport of provisions for the Japanese.

In the beginning of November the idea arose in the Russian general quarters to carry out an attack on the rear of the Japanese army for the purpose of diverting part of the troops from the front for the protection of the rear and thus to give the Russians facilities for carrying out the proposed offensive operations; to destroy the railway so that the regular transport of provisions to the Japanese army would be stopped and, lastly, to destroy the stores in the rear of the army, especially the considerable supplies at Inkou.

With the fall of Port Arthur, December 20th, the Russians proceeded to carry out this idea for the purpose of detaining the arrival of Nogi's army which was moving on to reënforce the troops disposed on the Scha-Ho. General Mischenko was charged to carry out this attack and a detachment was formed for him, consisting of seventy-two sotnias and squadrons, four mounted volunteer detachments and twenty-two guns; the detachment had a pack transport consisting of 150 pack horses attached to it.

The direction of the attack was to be along the Liaokhe. The task imposed on the detachment was the destruction of the magazines and storages of the Japanese especially those at Inkou (where it was said they had provisions worth several millions of roubles), and the blowing up of the railway bridges.

The region where the raid was to be carried out was densely populated, very fertile and not devastated by the war.

The line of communication of the Japanese and the rear positions were protected on the left flank by the river Liaokhe and its affluent streams. Although the rivers were frozen at that time of the year, they had very steep banks and high ramparts against their over-flowing which made them very difficult to cross.

At the time of the attack on Inkou the Japanese were protecting their left flank by occupying a defensive line on the Hoonhe and having three regiments, eight squadrons and four guns at Siaobeikhe—Beida-gou; the vanguards of this detachment consisting of one battalion, one squadron and two guns each, were disposed at Mamakai—Tchitaitzy, having in front of them a line of pickets. In the space between the Liaokhe and the Hunhe 3,000 Chounhous were observed. The passage on the line Outzyatou—Lidiaza was protected by an outpost picket. Newchuan was occupied by a Japanese detachment of 250 men.

The railway was strongly protected by Japanese troops, the stations and bridges were fortified and guarded by sentries.

The necessity of taking possession of Inkou obliged General Mischenko to direct the movement that way choosing the shortest route Kalikhe—Lidiaza—Newtchuan.

On the 26th of December, the detachment was concentrated at Suhudiapoo and on the same day marched on to Syfontai, a march of thirty versts where the Liaokhe detachment of General Kossagoffsky, eight battalions and three batteries, was disposed and destined to serve as support to Mischenko. On the following day the detachment reached Davan, thirty versts distance. On the 28th the detachment continued to move in three columns on the left bank of the Liaokhe. The columns moved on at a foot pace, maintaining a regular contact between themselves. From this day the movement continued under constant collisions; the enemy had to be dislodged from the villages on the way and the passages across the river had to be forced. After going twenty-eight versts the detachment arrived at Kalikhe, where it halted for the night, having routed, after a hot fight, a considerable band of Chounhous. On the same day two parties were sent out to destroy the railway. They did not succeed in blowing up any of the main construc-

tions, but only managed to damage the line near Haitchen, the repairing of which, however, required only six hours' time.

On the 29th of December the detachment moved on in three columns to Newtchuan, had an encounter by the way with the outpost picket at Udziatuy after which it avoided encounters with the Chounhous, which were occupying the villages on the way, but proceeded further by circuitous roads.

According to the information obtained Newtchuan was occupied by 250 Japanese, Inkou by 2,000 men, and Haitchen by 1,500, and a strong force was occupying Tashitchao. At about noon the detachment crossed the Taitsykhe near Kaolifan at one o'clock it came to Newtchuan. The Japanese outpost picket detained its vanguard but for a short time only, was partly destroyed, and part fled towards Haitchen. The detachment disposed themselves in the town which the Japanese had abandoned, destroyed the telegraph, burnt two stores and a transport of 300 wagons.

In the night between the 29th and the 30th patrols were sent out to the railway line, but they only succeeded in causing but a slight damage to the line near Tashitchaou and on the Inkou branch.

After this Mischenko moved on not towards Haitchen and the railway line, but towards Inkou. This decision was called forth by the above mentioned instructions of the Commander-in-Chief.

After a march of forty-two versts the detachment reached Liansiatoon where it halted for the night. From this point officer patrols were sent out to the railway line, which they damaged in several places. On the 30th of December, at 4:00 o'clock in the morning, the detachment set out for Inkou, but reached the town only at 11:00 o'clock owing to the dense fog and icy roads. The troops were allowed to rest until 4:00 o'clock, after which with the fall of darkness it was decided to attack the town from three sides. Inkou was occupied by two battalions with a few guns and machine guns. The above mentioned delay ruined the whole plan. The Russians did not destroy the communications between Tashitchaou and Inkou in time, the regiment of Colonel Count Shuvaloff having been charged therewith only just before the attack, thus enabling the Jap-

anese to transport to Inkou two battalions under the very eyes of the Russians.

After enfilading the stores near the station with fire, twenty-four dismounted sotnias attacked the town, but in the darkness they got into barbed wire entanglements and were met with a strong fire, which showed the impossibility of carrying the attack. The losses during this attack were twenty-four officers and 269 men, and the task imposed on the detachment of destroying the station and blowing the stores up, was not accomplished.

At the same time information was received regarding the movement of the Japanese infantry from Tashitchaou to Inkou and from Haitchen to Newtchuan. Fearing that he would be cut off, General Mischenko gave the order to stop the attack and retreated towards Liansiatoon, where he halted for the night. On the next day the detachment continued to retreat along the right bank of the Liaokhe, crossing the same near Doonheiyau, so as to avoid Newtchuan which was occupied by five battalions. Owing to the fog, and icy roads, encounters with the enemy and delays occasioned by the presence of the wounded and the pack transport, he only reached Tabetoon towards 10:00 o'clock in the evening. On the way the Japanese forced the detachment to move on, pursuing it with their infantry.

At day break on January 1st, they attacked Teleshoff's column near Sinyupootchenza. On the 1st of January the detachment made only thirty versts from 9:00 o'clock in the morning until 10:00 o'clock in the evening and halted for the night at Yaotzytchany. On the 2d and 3d the movement was continued. At Davan the detachment passed over to the right bank of the river, and moved along the same until it reached Kalama. On the 4th the troops were given a rest and on the 5th the detachment was dispersed. The losses of the detachment were 39 officers and 434 men.

The idea of carrying out an attack on the rear of the enemy with such a strong cavalry force deserves full commendations and approval most assuredly. It was one of the very few important and in theory most efficient enterprises of the cavalry during the whole war. But the proposed attack was unfor-

unately so unskillfully organized and carried out, that the results attained proved to be nil.

The reason of such a failure was the complete disregard of the principles of the affair, as regards the organization and the execution.

In regard to the former we must first of all point out the mistakes in the organization. In the formation of the detachment a complete improvization was admitted, which made the command of the same extremely difficult. Further it was entirely a mistake to hamper the detachment with a pack transport of 1,500 horses, accompanied by dismounted leaders moving along at a speed of from two to two and one-half versts per hour, thereby impeding the movement of the whole detachment.

A complete absence of secrecy prevailed during the formation of the detachment. The conditions under which the raid was to be carried out were discussed during the course of over two months. Having decided upon the attack in October, the Commander-in-Chief hesitated for two months and then ventured upon it only in December when the operation had already lost the chief condition for success, its suddenness, and when, besides, with the fall of Port Arthur, the circumstances had changed. Meantime, the proposed attack was being discussed so openly, that even Oku, in his field order issued in November, warned his troops of the possibility of its being attempted. The formation of the pack transport, its concentration at Syfontai and the concentration of the different parts of the detachment at the place of assembly were carried out quite openly and could not have remained unnoticed by the Japanese.

The object of the attack was set erroneously; the main forces of the detachment were charged with the execution of the secondary object, the destruction of Inkou, indicated by the Commander-in-Chief, whereas, for the carrying out of the chief object, the destruction of the railway, only six sotnias were commanded and dispatched in parts to blow up parts of the line. The destruction of Inkou, even in case of success, did not promise any results, as in November the port was frozen and Inkou could not serve as base for the Japanese. After

the fall of Port Arthur they had free access to the excellent port of Dalny, from where all supplies were transported by rail, and it was the destruction of the railway line that should have been the object of the attack, and not the destruction of Inkou.

Moreover, for the success of the attack in the sense of influencing the march of events, a certain connection with the principal operations was necessary. Without this connection, although the attack could have been successful, the results could not have any serious importance. The connection of the attacks with the principal operations must be understood in the sense of their being carried out in due time, in a certain region and their being executed in dependence with the march of the principal operations, with the objects pursued by the main army. In the case described the attack was executed by itself, as a separate event, without any connection with the operations of the army, which at that moment was wholly inactive and had no operations in view for the immediate future.

Hence this attack should be pronounced as having been carried out at a wrong time.

Lastly the commander of the detachment was not allowed a free hand in the organization thereof and was deprived of the necessary initiative in the choice of the region of action by the instructions of the Commander-in-Chief regarding the stores at Inkou and the time for action.

Such were the errors in the organization and general command over the operation.

In the execution of the attack the absence of rapidity of action and secrecy strike one before anything else. The detachment moved on at a rate of only thirty versts per day. Instead of taking measures for keeping the movement secret, by carrying out far and constant reconnoitering, by moving in zigzags, while spreading false information as to the direction of the movement, by demonstratively sending out detachments in different directions, by keeping the halting places secret, and lastly, by moving first in a wrong direction from the point of concentration and subsequent halting places, but, on the contrary, openly concentrating at the point of assembly, the detachment proceeded directly to the object of the operations without attempting to dissemble or hide the same. The in-

formation concerning the enemy was highly insufficient as the scouting parties were sent out to only an half-hour or even a quarter of an hour distance from the front. During the first two days the detachment attacked several villages occupied by the Japanese, instead of moving on and avoiding them. Naturally, the detachment drew attention to itself and towards the end of the movement and the Japanese had time to send their troops after the detachment from different sides.

The aggressive operations themselves were also not of a nature corresponding with such partisan attacks.

Such attacks must first of all be *sudden*. Consequently, their chief characteristics must be a *secret approach* to the object of the operations and a *rapid energetic* attack, so as to keep up the powerful moral impression caused by the unexpected appearance and the first furious onslaught, which increases by tenfold the force of the aggressive party at the moment. During the attack on Inkou, the detachment having stopped at a distance of ten versts from Inkou, made a halt of four hours, as if on purpose to give the enemy time to take the necessary measures for parrying the attack. The halt was made for the purpose of making the attack during the night. But this reason does not justify it. In such a case the last march should have been calculated so as to approach Inkou in the night and attack it suddenly, but not to stop in view of it and await the fall of darkness. Lastly, the attack itself in a place wholly unknown and unreconnoitred, could only lead to failure. It was led in dismounted order from the front where it was expected, and where the troops met with barbed wire entanglements and trenches, and in very unfavorable battle order. After the unsuccessful attack on Inkou, it was hardly right to halt for the night at Liansiantoon. It was too near to Inkou and in the sphere of operations of detachments of the enemy, which could easily prevent the detachment from crossing the Hunhe.

On the way back, the detachment encumbered with the wounded and the pack transport *crawled* along, pursued by the infantry of the enemy, and in accordance with the instructions given to General Mischenko could only act as *cover* to the transport with the wounded, without undertaking any active operations.

Thus the only important aggressive operation on the communications of the enemy during the whole war was a complete failure, owing to the disregard of the chief principles of such an enterprise, both as regards the organization and the execution thereof.

Besides the attack on Inkou our cavalry carried out two more attacks against the rear of the enemy, which deserve attention. These were the raid of Colonel Gillenschmidt on Haitchen between the 5th and 10th of October, and a second attack of General Mischenko's detachment on Fakoomyn, in May, 1905.

The aggressive operation of Colonel Gillenschmidt with four sotnias, having for its object the blowing up of one of the larger railway bridges, may be considered as the most successful one, not only as regards the results, as well as the way it was carried out. In this case the detachment was concentrated and formed in complete secrecy as to its intentions. The object of the operation was defined clearly and precisely, leaving to the commander of the detachment the initiative in the choice of the bridge to be blown up along a considerable distance of the line. The execution of the attack, as to the choice of direction, the order of movement, the rapidity and secrecy of the same, do not deserve a single word of reproof. The movement was executed in secrecy owing to the reason, that the troops moved in the sphere of observation of the enemy mostly during the night, avoiding roads and villages, and likewise, owing to the rapidity of the movement and the way they eluded all pursuits, by changing the direction from Sidiakoshen to the west thereby enabling the detachment to escape from the enemy's patrols, which had followed them during the first day's march. During the long halt at Tava, from half past four in the evening until 7 o'clock in the morning, on the 7th of February all measures for guaranteeing secrecy were observed. The village was surrounded by dismounted sentries and the whole detachment secreted in four farms. During five days the detachment moved along, covering seventy-four versts per day. One day, when there was a skirmish and a bridge blown up during a march of 26 hours, 130 versts were covered.

This attack may be considered as a model one by the way in which it was executed.

The result of it was that a large railway bridge was blown up and consequently the communication along the main line of communication of the enemy was interrupted. The duty imposed on the detachment was fully accomplished.

The losses of the detachment were two officers and thirty-four men.

In the attack of General Mischenko on Fakoomyn in May, the detachment was composed of forty-five sotnias, six guns and two quickfirers. The task set was: "To pass to the rear of the western group of the Japanese armies and to detain their taking the offensive by destroying their stores and transports and by damaging their ways of communication, especially the railway line." This attack was called forth by the desire to detain the offensive operations of the Japanese until the reinforcements which were expected to arrive between the 5th and the 20th of May. This obliged the detachment to develop their action in the rear of the enemy during the course of three weeks, which was impossible for it to do as large detachments can only pass through the rear of the enemy periodically, without remaining there. Note how raids were carried out during the American Civil War. The development of partisan operations in the rear during a continuous period of time is only possible, under favorable circumstances, for small parties which may remain a long time hidden in the rear of the enemy as was the case during the war of 1812 and the German War.

On the first day, the attack was directed in the neighborhood of Keipintcha on the left flank of the enemy's position, where the Seventh Infantry division was stationed. On the next day the detachment passed to the rear of this division, but owing to encounters with detachments of Japanese infantry and the Chounhous, it was obliged to change the direction three times. The unlucky choice of the direction led to the loss of the third's day march, destined for the turning of Fakoomyn, which was occupied by an independent force and only on the fourth day the movement was directed to the communication line Shifoozy—Fakoomyn.

This raid, as well as the first one, was also undertaken under a complete absence of secrecy. The object of the detachment was known on the 25th of April. At Liaonvan the detachment was being formed during several days nearly in view of the Japanese, attracting attention to itself by sending out patrols and by skirmishes with the Chounhous and the Japanese cavalry. The choice of the direction was an unlucky one also as it led constantly to encounters with the Japanese troops. The Japanese evidently expected the detachment to turn their flank. It was important for them to ascertain the direction of the detachment, that is to say, whether it was directed to the near, or the far rear, and the detachment by its movements clearly pointed out to the Japanese the direction and the object of its operations, so that by degrees as it moved further to the south, the Japanese moved out small parties which detained their progress.

As regards the rapidity with which the attack was carried out, it must be said that the whole movement was executed all the time at a foot pace with an average speed of only thirty-five versts per day, during which time the horses were kept under saddle ten to twelve hours. The detachment was considerably detained by the engagements called forth by the storming of the villages occupied by the Japanese.

The contact during the movement was kept up very unsatisfactorily. Parties for carrying out scouting at a distance were sent out very irregularly, unskillfully and they were made to do work which hindered them from accomplishing their direct object. Hence, they could not inform the Commander of the position of affairs in due time.

Owing to this, the detachment moved on blindly and the result was an unexpected encounter with the Japanese at Tcha-oobaoopa. On the 6th the detachment was obliged to stop and change its direction three times. On the 7th, the detachment was unexpectedly met by the fire of Japanese infantry with quick firing guns from the front, the east, the right and partly from the left. Thus, owing to the absence of reconnoitering, the detachment was driven into a corner out of which it had to break through to the south, with engagements at Tsin-saigao, Don-Siza, Tasiatoon, and others.

The protection of the movement was carried out in a singular way, very irregularly and at too near a distance, so that it could not save the detachment from the unexpected meeting with the enemy on the 4th.

The three mentioned engagements in which the detachment was forced to take part and which only delayed and detained the movement onward, were perfectly useless in themselves, in regard to the task set to the detachment, and even brought some advantage to the enemy by detaining the movement of the detachment.

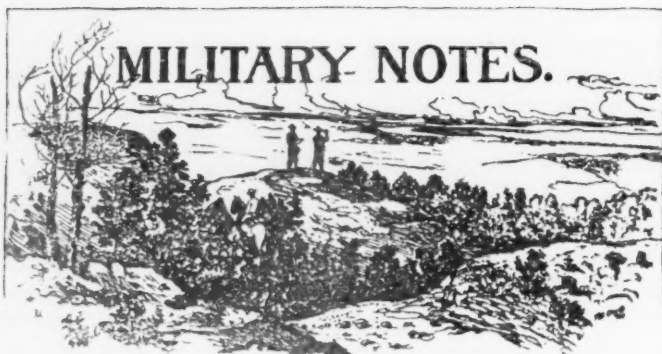
The battles themselves were conducted unskillfully, unconnectedly, with a complete disregard of the requirements of tactics, mostly in dismounted order and without the direct guidance of the senior commanders. The results of the three engagements on May 7th, were only the hampering of the detachment with the transport of the wounded and a great expense of artillery cartridges which stopped the movement along the line of communication of General Nogi. This line was occupied by strong parties of Japanese infantry and artillery, which by gaining a whole day's time they were able to move from Fakoomyn and Mukden. The Russian troops were obliged to desist from the movement towards Sinmintin for the purpose of destroying the enemy's stores.

The result of the attack executed by forty-five sotnias was the annihilation of two Japanese companies, the capture of 234 prisoners and two quick firing guns, the destruction of the telegraph and telephone lines in several places, the destruction of several transports and the capturing of 200 horses and mules. The losses were 14 officers and 187 men.

Thus, of the three attacks two were unsuccessful and one a perfect success. In examining the conditions under which they were carried out the failure of the first two must be explained, on the one hand, by the faulty organization of the business, the erroneous instructions given to the detachments by the chief authorities. On the other hand, by the manner of their execution, which showed a total lack of desire and ability to apply the methods recommended by theory, gained by past experience and guaranteed to bring success, that is to say, a complete disregard of the elementary principles of the business

and besides a complete absence of the cavalry spirit in the execution of the attacks. They were distinguished by a special slowness of action and produced an impression of heaviness and clumsiness. On the other hand, the thorough knowledge of the business evinced during the attack on Haitchen, the skillful application of the methods based on examples from the history of war, gave brilliant results, and proved that this attack bore the character of an enterprise carried out with the daring spirit worthy of the name of cavalry.

(To be Continued.)



A PISTOL MATCH.

WE have received a copy of an order issued from the Headquarters of the Eighth Cavalry which sets forth the conditions under which a competition in mounted pistol practice will be held in that regiment. The object of this competition is so commendable that it is hoped that similar matches may be held in other of our cavalry regiments. It matters not what the prize may be or by whom offered, such a competition in each of our cavalry regiments each year would be of immense benefit in stimulating an interest in this very important part of a cavalryman's instruction.

It is to be regretted that the mounted pistol competition was ever abolished.

The order is as follows:

GENERAL ORDERS / HEADQUARTERS 8TH CAVALRY,
No. 1. / Augur Barracks, Jolo, P. I.
February 11, 1913.

For the encouragement of mounted pistol practice in the regiment the Commanding Officer desires to have a competition to be known as "The Colonel's Match" which shall be held

before June 1, 1913, at those posts where troops of the regiment are stationed. The prize shall be a Colt's Automatic Pistol, suitably inscribed, of the latest model and one hundred rounds of ammunition, or a cash prize.

The conditions of this match shall be the same as the Record Practice for the Mounted Course as prescribed on page 164, Small Arms Firing Manual, 1909, with modifications as follows: A strip of yellow target paper four inches wide shall be pasted over the vertical line shown in the pictures of targets "Q" and "R," on page 191, Small Arms Firing Manual, 1909, sixty-one inches long on R and forty-four inches long on Q; hits on this strip to count four, hits on other parts to count two; the targets to be six in number placed six yards from the track. The length of track occupied by the targets to be one hundred yards. The time for firing a score of six shots to be twelve seconds. The scores to be of six shots each, the total number of scores being eight as at present. The Colt's Revolver Cal. 45 shall be used.

This competition is to be open to all officers and enlisted men of the regiment present at one of the stations where one or more of the troops are stationed.

The senior officer present at a station is requested to arrange the details of the competition and to report the records made to Headquarters.

BY ORDER OF COLONEL SWIFT:

A. B. COXE,
Captain 8th Cavalry,
Acting Adjutant of the Regiment.

A REMEMBERABLE "MORSE" AND "INTERNATIONAL MORSE" CODE.

THE writer is indebted to the Executive Board of the "Boy Scouts of America," and to Mr. Ernest Thompson Seton, Chief Scout, for the following pictorial "Morse" alphabet taken, by permission, from "The Official Handbook of the Boy Scouts of America."

The pictorial "International Morse Code," (or Continental Code, as it is commonly known), shown herewith, has been devised by the writer, using certain symbols from the "Morse Code" in cases when the letters are the same in both codes and adding new symbols where the letters are different.

It is believed that the following rememberable "International Morse Code" should be of peculiar value to the line of the army, particularly in view of the fact that the International Code has now superseded the old "Myer Code" for all visual and sound signaling in the service, as well as being used for all radio telegraph signaling and on cables using the siphon recorder. (See Cir. No. 10, War Department, Office of the Chief Signal Officer, October 25, 1912). Par. 1584, Army Regulations, as amended by Changes No. 16, Army Regulations, War Department, 1912, says: "The Department Commander will supplement the operations of the Signal Corps of the Army by such instruction in practice in military signaling as may be necessary for the public service. He will cause each troop, battery and company commander to have, at all times, at least two available enlisted men able to exchange messages at short distances by flag, using the International Morse Code, which shall hereafter be known as the General Service Code."

In line with the above quoted paragraph of Army Regulations, nearly every Department Commander has in the past, also required that every company line officer shall be proficient in visual signaling.

Any one of us who has ever, in the past, wrestled with the problem of having "at all times, at least two enlisted men of the company available for signaling with the flag, at short distances" knows the primary difficulty of getting men to learn the alphabet and then to retain it in their memory from day to day. It is a well known fact that we remember things, through an association of ideas; the greater the contrast between these ideas, or the farther we get from the conventional, the greater will be the probability of our remembering the ideas with which other ideas are associated.

The symbols of these alphabets have been brought from rather "far afield" and with the view of making marked con-

REMEMBERABLE-ALPHABETS

MORSE	INTERNATIONAL MORSE OR CONTINENTAL
A-- .A	A-- .A
B---- Blunderbus 	B---- Blunderbus 
C.. Couriers couring 	C---- Country Couples 
D--- Dog & Ducks 	D--- Dog & Ducks 
E• Eyelana •	E• Eyelana •
F--• Fringing France 	F--• Funny Fruit 
G--- Gay Goats 	G--- Gay Goats 
H---- HopHop Hop Hop ----	H---- HopHop Hop Hop ----
I .. I's 	I .. I's 
J-- Jim, Jam; 	J-- Jug & Jacks 
K-- Kids kapering 	K-- Kids kapering 
L-- Lance 	L-- Lanterns & Lizards 
M-- Ma Ma	M-- Ma Ma
N-- Nimble Nig 	N-- Nimble Nig 
O. • 	O---- Oars 
P----- Pussy's Prints	P----- Pyramids & Pins 
Q----- Quails & Toast 	Q----- Queer Quirks 
R••• Reverse of C 	R--- Raging Ram 
S... Stones 	S... Stones 
T- T	T- T
U... u-u beast 	U... u-u beast 
V---- v-v-v-very 	V---- v-v-v-very 
W--- Wolf & Wagons 	W--- Wolf & Wagons 
X--- x pen s s 	X--- Xtreme Xpressions 
Y... Y's 	Y--- Yachts & Yawl 
Z.... z's ? 	Z--- z's z's z's 

By this Method it is possible to learn either one of these Alphabets in less than one hour

trasts, and while they may seem ridiculous, it is this very feature that causes them to be retained in the memory.

It is claimed that by this method of illustrating these alphabets, it is possible to learn either one *in less than an hour*, and in this age, anything that will save time, is of value.

If this method has proven of value to the "Boy Scouts of America," it certainly will be of value to we older "boys" in the service.

VERNON W. BOLLER,

First Lieutenant Second Infantry.

THE FEEDING, WATERING AND RESTING OF LIVE STOCK IN COURSE OF INTERSTATE TRANSPORTATION.

IN connection with the enforcement of the Twenty-eight Hour Law (34 Stat., 607), the Bureau of Animal Industry has made investigation of the feeding, watering and resting of cattle, sheep, swine, and other animals while in the course of interstate transportation. The results of this investigation and the conclusions based thereon are announced as an indication of the views of the Department of Agriculture as to the minimum requirements of the law.

FEEDING.

The amount of feed which should be given to different classes of animals varies with the length of time between feedings and the weights of the animals. For each twenty-four hours the ration for horses and cattle should be not less than one and one-fourth pounds of hay to each hundred weight of animal; for sheep, not less than one and one-half pounds of hay to each hundredweight of animal; and for hogs, not less than one pound of shelled corn, or its equivalent in ear corn or other grain, to each hundredweight of animal. For periods greater or less than twenty-four hours, the ration should be greater or less, respectively, in the same proportion.

UNLOADING.

The only practicable method for railroads to transport animals, other than hogs, without unloading during each period prescribed by the statute for rest, water, and feeding, are in "palace" or similar stock cars and with emigrant outfits. There are cases in which exceptional facilities complying with the law make unloading unnecessary; for instance, specially equipped cars conveying show animals and blooded stock. In such cases care should be taken to observe the law. In all cases, if animals are not unloaded, sufficient space to permit all the animals to lie down in the cars at the same time must be provided.

Hogs may be fed, watered, and rested, without unloading, provided (a) the cars are loaded so as to allow all the animals to have sufficient space to lie down at the same time, (b) the trains are stopped for sufficient time to allow the watering troughs to be prepared and to allow every hog time to drink his fill, and (c) care is exercised to distribute properly through each car deck sufficient shelled corn, or its equivalent in ear corn or other grain, for each hog.

UNLOADING PENS.

All pens into which animals are unloaded must contain adequate facilities for feeding and watering and suitable space on which the animals can lie down comfortably for resting. Covered pens should be provided for unloading animals in severe weather.

B. T. GALLOWAY,
Acting Secretary of Agriculture.

A CHIEF OF CAVALRY.

THE following decree from the Minister of War of France has attracted considerable attention in this country, where for the sake of uniform training and the higher development of cavalry the same office has been considered necessary:

On March 18th a decree was signed creating the office of Inspector General of Cavalry.

2. The officer selected must be a Major General, a member of the War Board (Conseil Supérieur de la Guerre) and must have come from the cavalry arm.

3. His duties are in general to assure to the cavalry unity of views and doctrine in all that concerns the application of the regulations special to the arm; to inspect with this object in view all the cavalry except that in Africa; to direct the technical instruction of general officers and colonels of cavalry; to direct the larger cavalry maneuvers.

His reports and recommendations are made directly to the Minister of War.

Under present conditions, with the regiments widely separated, commanded by officers of most diversified views, there can be no consistent and uniform training in our cavalry. Even with an Inspector-General of Cavalry, it is doubtful whether the best mounted results could be obtained, unless there were some given place wherein at least a brigade could demonstrate true cavalry handling.

There is no country which does not have a sufficient number of groupings of cavalry consisting of brigades or more, except our own. Before we can reckon upon the highest development of this branch, it would seem to be necessary to, not only have a head to it, but also to have places where the proper theoretical methods could be shown empirically to be right.

REGIMENTAL COST ACCOUNTING.

AN experimental system of cost accounting could be inaugurated in each regiment as follows:

ORDNANCE SUPPLIES.

1. A book, to be known as the Cost Account Book to be kept in each company.

2. The Post Ordnance Officer to figure the money value of each invoice of supplies. This invoice to be quoted as a voucher for the charge and the entry to be numbered the same as the voucher to the ordnance return.

3. When an article is dropped as charged on the pay roll, an entry is to be made on the credit side of the account. The abstract of charges on the pay rolls is to be quoted as a voucher for the credit taken. The article, when replaced, is charged as usual.

4. In case defective property or property broken in transit is received or property is lost in transit and charged against an organization, the charge is to stand until the articles are declared defective, broken or lost in transit by a Survey Officer or Inspector, when credit will be taken for the same.

QUARTERMASTER SUPPLIES.

1. A book, to be called the Quartermaster Cost Account Book is to be kept in each company.

2. The Post Quartermaster will furnish each organization with an issue slip for each drawing of supplies. These slips should be numbered consecutively for each organization and to show the cost of the articles issued. The receiving officer will enter only the total cost in the cost account book and will quote the number of the issue slip as a voucher for the charge.

3. Whenever an article is charged to an enlisted man who carelessly lost, damaged or destroyed it, credit will be taken for its money value. When the article is replaced, a charge will be made against the organization.

4. In case defective property, or property broken in transit is received or when property is lost in transit, it will be charged against the Company. This charge will stand until the property is declared by a Survey Officer or an Inspector to have been defective, or broken or lost in transit, when credit for the money value of the same will be taken.

REPORTS.

1. At the end of each quarter, the cost account thus kept in each organization will be totaled and reported to the Adjutant on forms prescribed from Regimental Headquarters.

2. These reports will be consolidated by the Adjutant and published in orders for the information of all concerned.

3. Defects found in this system could be corrected from time to time.

There would seem to be little doubt as to the potential value of such a scheme. It would cause company commanders to vie with each other in the care and saving of such supplies and beget a keen rivalry in economy that must increase efficiency and inure to the immense advantage of the government.

The system, of course, should be extended to include the property of the Medical Department used at a post. This would have to be done from above. But it could be extended to cover Engineer and Signal Corps property by the Post Commander.

Forms that might be used are enclosed. The word "company" is used to include troop or battery.

J. C. GRESHAM,
Colonel Tenth Cavalry.

FORMS.

QUARTERMASTER DEPARTMENT,

Fort.....

.....191.....

Voucher No. to Cost Account.

Issued.:

..... Cost: \$.....

"

&c.

&c.

&c.

&c.

Total: \$.....

REPORT OF COST.

" " Troop, 20th Cavalry for the Quarter ended.....191.....

Ordnance.....	\$.....
Quartermaster.....	\$.....
Total:	\$.....

Kind of service.....
 Number of days in the field.....
 Number of days in the garrison.....
 Remarks.....

I certify that the above is a correct report,

Captain 20th Cavalry, Commanding Troop.

CONSOLIDATED COST ACCOUNT.

For the.....Cavalry. For the quarter ended.....191.....

TROOP.	ORDNANCE.	ORDER.	QUARTERMASTER.	ORDER.
A				
B				
&c.				
&c.				
L				
M				
Band				

By order of.....

Adjutant.

TYPICAL CAVALRY MOUNTS.

HEREWITH are reproduced three photographs of horses which were furnished by Captain J. M. Burroughs, Second Cavalry. Regarding them he writes:

"I am sending herewith some photographs of my thoroughbred horses which I consider good types of mounts for officers.

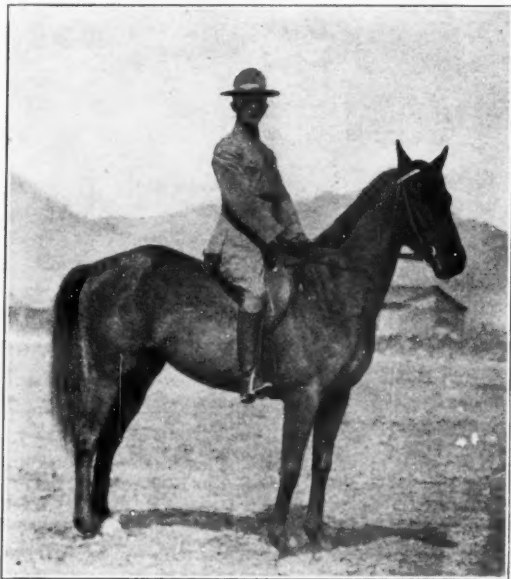


GEORGE GUYTON.

Chesnut gelding; six years old; sixteen and three-fourths hands; weight 1,100 lbs. A Kentucky thoroughbred that raced five furlongs at Jaurez, Mexico, meet in 1.04½. By "Comlter Tener," out of "Seething."

The racing meet just closed at Jaurez, Mexico, has done a great deal in stimulating the interest in good horses among officers who have been stationed in this vicinity and many have been purchased by them."

Notwithstanding the fact that the reproduction of photographs greatly increases the cost of publishing the JOURNAL, yet it is believed that the matter of interesting our officers in the subject of proper mounts for themselves and for their



SECUGA.

Bay gelding; four years old; fifteen and three-fourths hands; weight 950 lbs. A California thoroughbred. By imported "Fort Lake," out of "Sidonia."

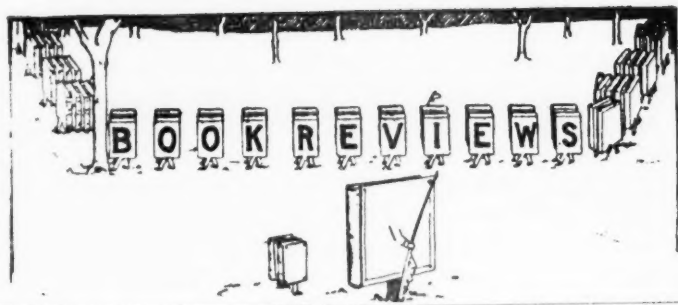
troopers is of such vast importance that the money expended for publishing cuts of what are considered typical mounts is well invested.

It is hoped that other officers will send in photographs of their horses and also that our cavalrymen will report what they consider defects in the mounts so illustrated, this for the purpose of stimulating discussions on the subject.



MONTE.

Bay gelding; five years; fifteen and one-half hands; weight 950 lbs. Breeding unknown. Troop horse bought at Excelsior Mo. by Q. M. Department. In high state of training. Jumps five and one-half feet. A typical cavalry mount.



**History
of
Cavalry ***

This book of about 450 pages, in addition to a very complete index, is the second, but not revised edition of the original work published in 1877.

In the preface to this addition the author says:

"This book was first published in London in March, 1877. As mentioned in the Preface to that edition, it had been prepared to compete for the Emperor of Russia's prize offered for the best History of Cavalry. Permission was given me to publish the English edition without waiting for the decision.

"In September, 1877, I received notification from the Russian Authorities that it was decided that I should receive the first prize of 5,000 roubles, which was forwarded to me shortly after.

"Over thirty-six years have elapsed since the publication in London, in 1877, and for about thirty years the book has been out of print, and of late years very difficult to obtain. As it is I believe, the only general history of the Cavalry Service that has been published in any language, and as history does not

*"A History of Cavalry from the Earliest Times, with Lessons for the Future." By Colonel George T. Denison, late Commanding the Governor-General's Body-guard, Canada. Author of "Modern Cavalry," etc. Macmillan & Co., Ltd. London and New York, 1913. Price, \$2.75, net.

change, I am having it reprinted exactly as it originally appeared without note or alteration. The concluding period on "The Organization, Armament and Employment of Cavalry in Modern Warfare," is the only portion in which comment need be made, and that can be dealt with in this Preface."

The author then goes on, in this preface, to comment upon the use of cavalry in the Boer War and the Russo-Japanese War, devoting about six pages to this and a discussion of the subject of *fire action* versus the *Arme Blanche*. Regarding this he writes:

"There has been in the last few years some interesting literature upon the question as to whether cavalry in the future should depend upon fire action, or upon the 'Arme Blanche.' Probably the most important work is by General von Bernhardt of the German army on *Cavalry in Future Wars*, published first in 1899, and a second edition in 1902, translated by Charles Sydney Goldman, and published in English in 1906, with an introduction by General Sir John French. This was followed by a very able criticism in *War and the Arme Blanche*, a book written by Ernest Childers, the editor of Volume V of the Times' *History of the War in South Africa*. This has a very interesting introduction by Lord Roberts and was published in 1910. Contemporaneously with the publication of *War and the Arm Blanche*, General Von Bernhardt published in Germany another book, translated by Major Bridges, under the title of *Cavalry in War and Peace*. This English edition also contained a Preface or Introduction by General Sir John French. This led Mr. Childers to write another critical work in reply, entitled *German Influence on British Cavalry*.

"These books with the writings of Colonel Henderson, Sir Ian Hamilton, and Count Wrangel enable one to gather the opinions of the best authorities of the day on the disputed question of the effect of the improved fire arms on cavalry in contrast with the principle of the *arme blanche*. When my book was published in 1877, almost all cavalry officers were opposed to the mounted rifle principle which I advocated so strongly. I wish now to show how the South African War and the Russo-Japanese War have modified the opinions of the foremost cavalry leaders and writers.

"The late Colonel Henderson, speaking of the German cavalry during the war of 1870-71, says: 'The troopers knew nothing whatever of fighting on foot. Their movements were impeded by their equipment and a few *Franc tireurs* armed with the chassepot were enough to paralyze a whole brigade.' And again: 'Should not the cavalry, confronted by new and revolutionary conditions, have sought new means of giving full effect to the mobility which makes it formidable?' "

"Lord Roberts, in his introduction to Mr. Childers' book, is also very clear and definite in his views about the rifle as the arm for mounted men. Speaking of the Boer War, he says: 'As, however, it was the first war in which magazine rifles were made use of and as the weapon used in future wars is certain to be more effective on account of the lower trajectory and automatic mechanism to be introduced, shall we not be very unwise if we do not profit by the lessons we were taught at such heavy cost, during that war?' "

The book has thirty-four chapters, divided into six periods, as follows: Period I.—To the Fall of the Western Roman Empire. Period II.—To the Invention of Fire Arms. Period III.—To the time of Frederick the Great. Period IV.—To the introduction of rifled Fire Arms, 1740 to 1854. Period V.—To the Present Time. Period VI.—Organization, Armament, and Employment of Cavalry in Modern Warfare.

The book is illustrated with eleven maps and plans; is well printed on good paper and bound in the usual style of all British military books.

**With
the Bulgarian
Staff.***

This work fails to fully satisfy the anticipations excited by its title. It contains no maps, no descriptions of military dispositions or operations and gives no insight into the routine of a staff controlling an army.

The author states that he joined the staff of General Savoff only eighteen days after the outbreak of the war; but it appears

*"With the Bulgarian Staff," by Noel Buxton, M. P., published by the Macmillan Company, New York. Price \$1.25 net.

that he saw nothing of the battles of Kirklisse or Loula Burgas and but little of the siege of Adrianople. In regard to Loula Burgas he says: "A few days after the great battle, and before the trenches, the debris, or even the dead had disappeared, we obtained facilities for riding over the field," etc.

The interest of the reader is sustained chiefly by recitals of "horrors," badly policed battlefields, the suffering of wounded men due to defective sanitary organization, painful operations performed by surgeons without using anaesthetics, women and children who had been disfigured or maimed by Turks, etc. There is a great deal of matter in regard to the work of the Red Cross hospitals, which gives the impression that the author saw more of them than of the army. The suffering, loss of life and waste caused by the war convince the author that war is a bad business and ought to be suppressed. However, he concedes that others do not agree with him on this point, for he says in conclusion, "The Balkan War has made converts to war in general. Its merit is seen in liberated nations. The allies, it is held, were justified in fighting. Of course they were but should the sacrifice have been forced upon them?" etc.

The book contains 163 pages of printed matter and twenty-two interesting photographs. The printing paper and binding are of the best quality.

The general reader can glean from it many interesting details in regard to Bulgarian and Turkish life and character.

F. S.

Ophthalmology This work is arranged in twenty-one chapters with forty-four illustrations.

For .
Veterinarians.* The chapter on Recurrent Ophthalmia—"Periodic Ophthalmia" or Moonblindness—is dismissed with two pages and a half in which the writer freely admits he possesses no knowledge on this, to the Veterinarian, important subject.

*"Ophthalmology for Veterinarians." By Walter N. Sharp, M. D., Professor of Ophthalmology in the Indiana Veterinary College. W. B. Saunders Company, Philadelphia and London. 1913. Price \$2.00 net.

The treatment of the whole subject indicates that the author is very little of a Veterinarian and nothing of a horseman.

The book is suited to the use of Veterinary College students for whom it is evidently intended. To the seasoned practitioner it will be a disappointment.

GERALD E. GRIFFIN,
Veterinarian Third Field Artillery.



FORGOTTEN CAVALRYMEN.

It appears from a letter received from Colonel Swift, the author of the article, under the above title, that appeared in the January, 1913, number of the CAVALRY JOURNAL that something was omitted from the next to the last paragraph of that article. Regarding it, he writes:

"Something happened to the Harrison article. In the next to the last paragraph a line appears to have been left out. It was Harrison who was escort and that was why it was a reunion of the officers of the old regiment. If you can find the manuscript, please look it up and make the correction. In case it cannot be found, kindly publish a note to that effect. This for the benefit of history."

Unfortunately the manuscript of the article in question has been destroyed and therefore the paragraph as printed cannot be compared with the original copy.

CAVALRY REORGANIZATION, ETC.

Other replies have been received from Branch Cavalry Associations to the several propositions sent out for consideration by the Executive Council of the U. S. Cavalry Association, as set forth on page 1072 of the CAVALRY JOURNAL for May, 1913. They are as follows:

"1st.—That this Branch Association approves the General Staff plan for the 'Organization of the Land Forces of the United

States,' as published by the Secretary of War in pamphlet dated War Department, Washington, August 10, 1912, and recommends that the CAVALRY JOURNAL, through its columns, advocate its adoption.

"2d.—That this Branch Association recommends that the CAVALRY JOURNAL, through its columns, oppose any present change in the organization of our cavalry.

"3d.—For the following reasons, this Branch Association opposes the proposed bill as set forth in the resolution adopted by the West Point Branch Association and introduced into Congress during the last session by the Honorable Dan Anthony, M. C., providing that officers shall be given relative rank according to the length of their continuous commissioned service in the regular army:

"This bill will disarrange the officers of each arm among themselves on the *relative* list. While the position of officers of any particular arm will not be changed on the *lineal* list of that arm, they will take rank on the relative list according to the length of their continuous commissioned service in the regular army. No provision is made for adjusting the relative rank of each arm in each grade of those officers who have lost rank by sentence of court martial, or lost rank by failure to pass examination for promotion, or lost rank by reason of voluntary transfer from one arm of the service to another or to prevent the loss of *relative* rank of those officers who gained rank through regimental promotion, or those officers who were given credit for commissioned service in voluntary forces in determining their lineal and relative rank.

"It is true that under the provisions of this bill, officers of each arm of the service will remain on the *lineal* list as now arranged but the lineal list does nothing more than fix the order of promotion, while the *relative* list, or in other words relative rank, is actual rank; that is, it determines the eligibility for command, precedence, and all other matters which go with actual rank.

"It is thought inadvisable at this time to attempt to do more than arrange the relative list in each grade in accordance with length of commissioned service, the length of commissioned service, or in other words the position each officer will occupy

on the relative list, to be determined as recommended in Chapter VII, General Staff plan for 'The Organization of the Land Forces of the United States.'

"4th.—In order that there may be no miscarriage of the General Staff plan for 'The Organization of the Land Forces of the United States,' this Branch Association thinks that all bills purporting to put into force the whole or any part thereof should emanate from the General Staff, and be presented at the instigation of the War Department, and that the Cavalry Association should discourage the introduction of bills relating thereto emanating from other sources."

1. It is the sense of this Branch of the Cavalry Association that the plan of the General Staff for the reorganization of the several arms of the mobile army be approved by the Cavalry Association, excepting "*elimination*" and "*promotion by selecting*," but that it is not deemed advisable to make any pledge along the lines suggested by the *Infantry Journal*.

2. That the Cavalry Association advocates the adoption of the bill proposed by the West Point Branch Association regarding the relative rank of officers.

3. It is the opinion of this Branch of the Cavalry Association that the present time is not opportune to even discuss a change in cavalry organization.

Since the issue of the May, 1913, number of the CAVALRY JOURNAL and the publication therein of the reports from the several Branch Associations on this subject, we have received many letters from cavalry officers, who are not on duty where these Branch Associations are located, and who most heartily concur with these reports as being against any change in our present organization for the cavalry. These letters are from officers of the rank of captain or above. The following are extracts from some of them:

"I judge from the text of the reports published as coming from the Branch Associations that the Executive Council of the Cavalry Association have a fairly unanimous bunch of cavalymen behind them, on the main points at issue.

"Hope that these reports will strengthen those of the Cavalry Board who are opposed to a change in our organization in their important work."

"The cavalry seems to be worked up over the proposed changes in organization, judging from the reports from them from all parts of the world.

"As far as I am able to learn, there are but a few who are desirous of a change in our organization and that all the others, some 800 in number, seem to be stubborn and refuse to fall in with the ideas of those proposing or desiring a change.

"Change in organization requires legislation but the habitual double rank that is being agitated and is now being tried out at Huachuca can be adopted by order. I understand that the Board, as now constituted, favors the double rank by a large majority.

"I believe that our present squadron is an ideal unit for mounted action and that our regiment is a real unit for battle with the rifle, its 900 dismounted men furnishing the equivalent of a German battalion of infantry.

"The Germans rate a dismounted cavalry division as being equal to one battalion of infantry. With them, it takes a cavalry corps to produce a firing line equal to one regiment of foot soldiers.

"In our service, two regiments of cavalry dismounts 1,800 men which is the equivalent of one regiment of infantry at war strength.

"Our cavalry regiments are worth something on the firing line which is more than can be said of the European cavalry regiments.

"Our drill and training can be and will be improved but our organization is all right. The troops should be a little larger."

"I heartily approve of your remarks about getting back to the cavalry carbine."

"I am glad to read in the *CAVALRY JOURNAL* which has just been received that the cavalry have taken the stand it has in reference to organization."

RELATIVE RANK.

It would appear from the report of one of our Branch Associations, given in this number of the *CAVALRY JOURNAL* under the head of "Cavalry Reorganization, etc." and also from some of the reports published in the May number, that a preference exists for the General Staff plan for the readjustment of relative rank over that provided in the bill advocated by West Point Branch Association.

We have received from one of our members a decided protest against the terms of this bill as introduced by Mr. Anthony as operating to the disadvantage of those who came into the regular service from the volunteers under Act of February 2, 1901. He writes in part as follows:

"If the officers of the Fort Leavenworth Branch did not have the same views as to the effect of the Anthony Bill, when it was approved by that Branch, as I have, I will appreciate it very much if you will consult the Law Department of the Schools, and any other officers that you may desire including, if possible, one or two officers who came into the regular service with prior volunteer service, and see what their views are on the subject, when they consider carefully the wording of the bill.

"The bill advocated by the West Point Branch and introduced during the last session of Congress by Mr. Anthony is as follows:

“Officers of the army below the grade of brigadier general shall take rank in their grade upon the relative list, according to the length of their continuous commissioned service in the regular army; *Provided*, that nothing in this act shall be construed to change the present rank of any officer on the lineal list of his own arm of the service, as at present determined according to the act of February 2, 1901; and, *Further Provided*, that nothing in this act shall be construed to change the present rank, on the lineal list of his own arm of the service of any officer who has lost rank by reason of sentence of a general court martial or through his failure to pass examination for promotion.’

“This will bring about results entirely different from those contemplated in the General Staff plan, Chapter VII, ‘The Organization of the Land Forces of the United States,’ in that all officers will take position on the *relative* list ‘according to the length of their continuous commissioned service in the *regular army*’ without in any way adjusting the rank of the officers:

(a) Who have lost rank by a sentence of a general court martial;

(b) Who have lost rank by failure to pass examination for promotion;

(c) Who have lost rank by reason of voluntary transfer from one arm of the service to another;

(d) Who have gained rank by regimental promotion, and

(e) Who, by the Act of Congress of February 2, 1901, were given credit for commissioned service in volunteer forces in determining their lineal and relative rank in the regular army.

“I cannot help but believe that the full effect of this bill is not fully understood by its author. Owing to the temper of the present Congress, it is believed to be a most inopportune time to attempt legislation, which will cause such an upheaval in rank with the attending bitter opposition which it is sure to meet by the great number of officers who came into the Army under the act of February 2, 1901.

“I think there is no doubt as to the interpretation of this bill. The first paragraph provides that ‘Officers of the Army below the grade of Brigadier General shall take rank in their

grade upon the *relative* list, according to the length of their continuous commissioned service in the Regular Army.' The provisos in the next two paragraphs in no way affect the arrangement of the *relative* list as directed in the first paragraph. Therefore, all officers of the army below rank of Brigadier General in each grade must take rank on the relative list according to the length of their continuous commissioned service in the regular army. The fact that an officer may have lost rank by sentence of court martial, or failure to pass an examination for promotion, or by voluntary transfer to another arm of the service would not enter in the preparation of this relative list. Furthermore, all the officers who came into the regular army under the Act of Congress of February 2, 1901, must be placed on the relative list 'according to the length of their continuous commissioned service in the regular army,' thereby losing the benefits of their commissioned service in the volunteer forces given them by the Act of February 2, 1901. This, in the case of volunteer officers, would place them on the *relative* list in their respective grades below all officers who came into the regular army on or before February 2, 1901.

"Under the provisions of the second and third paragraphs of the proposed bill, all officers would retain the positions they now hold on the lineal list of their respective arms and as a result thereof would get their promotion in the order now provided. Under the most liberal interpretation, these provisos could possibly have no other effect. In other words, the first paragraph of the proposed bill fixes the *relative* rank of all officers, while the provisos in the second and third paragraphs do nothing more than fix the lineal rank of officers in their own arm of the service. *Relative* rank carries with it the right to command precedence in all matters, and all perquisites that go with actual rank, while the *lineal* rank determines nothing more than the right to promotion.

"Under existing laws, the relative rank of an officer is determined principally by his position on the lineal list of his own arm, (see pages 963-970, Digest of Opinions of the Judge Advocate General of the Army, 1912), but under the provisions of this proposed bill an officer's lineal rank would have nothing to do with determining his relative rank. For example, Captain

Bjornstad now stands 407 on the relative list and 203 on the lineal list of Infantry. He accepted his commission in the regular service September 18, 1901, to rank from February 2, 1901. Granting that it could be so construed, which is exceedingly doubtful, that he should take rank on the relative list from February 2, instead of September 18, 1901, he would be placed on the relative list probably behind the class that graduated from the Military Academy February 18, 1901 to rank from February 2, 1901, and certainly behind all officers who came into the regular service prior to February 2, 1901. Thus, while he would get his majority ahead of Connelly, 26th Infantry, who is 204 on the lineal list of captains of infantry, he would in so far as command, precedence and perquisites go, be behind all officers who are now captains or hereafter become captains and who came into the regular service on or before February 2, 1901, other than officers who came in as he did with prior service as commissioned officers in volunteer forces. In other words, this bill would not only rearrange the relative rank among the different arms, but it would change the relative rank among themselves of officers of each arm of the service. Is this the intention of the author of the bill and the members of the Fort Leavenworth Branch of the Cavalry Association?

"Chapter VII, 'The Organization of the Land Forces of the United States,' made provisions for adjusting relative rank of all officers who now occupy what may be termed anomalous positions on the lineal list of their respective arms. The letter which is made a part of the proposed bill sent out by the West Point Branch Association implies that the bill will have no other than this latter effect. It may be that this is their understanding of the effect of the proposed bill should it become a law and that the Fort Leavenworth Branch was under the same assumption when it indorsed the bill. If this be the case, it is probable that the West Point and the Fort Leavenworth Branches would agree to substitute the General Staff bill. It is believed that the General Staff plan would not meet with much opposition."

PROVISIONAL CAVALRY DRILL REGULATIONS.

The Editor has received from the Chief of Staff of the Army copies of certain reports made on the Provisional Drill Regulations as exemplified by Captain Frank Parker, Eleventh Cavalry, with a provisional squadron at Fort Huachuca, Arizona, and which he states: "I think will be of interest to the cavalry service at large."

These reports are given below, omitting headings, signatures, etc., as well as such parts as do not strictly relate to the subject matter of the drill:

From General H. L. Scott, U. S. Army:

"The experimental squadron was composed of men of the Fifth Cavalry, with Lieutenants D. R. Rodney, A. W. Hanson, F. C. V. Crowley, and W. H. W. Youngs, as platoon commanders, all commanded by Captain Frank Parker, Eleventh Cavalry.

"The squads, platoons and squadrons were exercised in all the movements laid down in the experimental regulations, at all gaits, with excellent results. It was evident at once that a great deal of work had been accomplished by Captain Parker and his assistants in the very short time since his arrival. The riding with double rein and posting at the trot for some time past, compulsory in the Third Cavalry, gave a control of the horse, steadiness, and uniform solid appearance to the command not obtainable in any other way. The system of regulations was simple and easily learned. The part relating to the double rank gave a formation of great compactness and of the utmost smoothness and flexibility in every direction, the squadron in double rank taking up but one-half the space required for the same number of men in single rank.

"The movement to the rear, when advancing in line, each individual turning on his own ground, was rapidly, easily and smoothly accomplished, much more so than if wheeled about by fours.

"The extended order and dismounting to fight on foot was smooth and rapid.

"The system of signals by which the leading was done appeared complicated to a stranger at a distance, but when studied on paper were found to be simple, and must be so, for the leading was done easily and swiftly, and the signals were promptly obeyed without a mistake; in fact, the whole system lent itself to a direct, silent, steady, and continuous progression, and that rapidity, without lost motion, so essential to the cavalry arm."

From Lieutenant Colonel D. L. Tate, Fifth Cavalry:

"I have been a frequent spectator at the daily drills under you at this post during your experimental work for the Cavalry Board, and I wish to say that the prejudice which I had against the proposed changes in our system has been dissipated by observations of your work.

"I have read the statements made by yourself, the officers, and the non-commissioned officers of the Fifth Cavalry, who were under your instructions and these statements embody as clearly as I could have done, my views of the advantages of the proposed system.

"I have not seen that part of the system which corresponds to our 'School of the Trooper,' nor have I seen how the system would apply to larger commands than the one under a captain.

"It is my opinion that the system would not work with the small number of privates available in our present troop."

From the Officers of the Squadron:

"The organization of the Provisional Squadron is excellent in that:—

(a) From captain to corporal each officer and non-commissioned officer exercises a proper command.

(b) The Articulation by Platoon, and the Double Rank give a compact mobile squadron of 133 sabers, easily controlled as a unit by the Captain under all circumstances, and readily separated, at a moments' warning, into four highly mobile platoons of considerable strength.

(c) The duty of keeping the platoon up with the leader, now falls upon the non-commissioned officers, so that leaders and captains are free to think of where they are going and what they will do when they get there.

"The provisional Drill Regulations are exceedingly simple, few in number, and satisfy all demands.

"There is nothing that can be done with the single rank organization that can not be done with the double rank organization.

"The system of leading by signal is highly satisfactory.

"After every possible test, under varying conditions, has been given the provisional squadron under the Provisional Drill Regulations, both organization and drill regulations are satisfactory in all respects, and received our unqualified endorsement."

From the Non-Commissioned Officers of the Squadron:

"1. Signals.—Simple and easy to learn.

"2. Double Rank.—More compact and easier to handle than single rank, owing to the small front.

"3. Drill.—Keeps all men on the alert; watching the leader for signals holding the attention.

"4. Movements.—Simple and easy to learn.

"5. Responsibility.—Each officer and non-commissioned officer has a unit for which he is responsible at all times.

"6. Extended Order.—When the position to be occupied has been made known, the squadron or units thereof march to the new position by the most direct route and at the gait indicated by the signal of the leader.

"7. Jumping.—Hurdles, ditches, passing obstacles, cross country riding as taught, has taught the men to understand and ride their horses in a manner new even to the oldest soldier, and has given them confidence in riding, at the fastest gaits over the roughest of unknown country.

"8. In addition to the fact that all confusion has been eliminated, the absence of the multitudinous commands by

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trumpet and word of mouth, gives a resting element to the drill that is appreciated by both the participant and the observer.

"9. All are unanimous in thinking that the provisional drill as proposed for the reorganization of cavalry is far superior to the present drill regulations.

There was also a report from Sergeant Major Middagh, Fifth Cavalry, confirming the opinions set forth by the non-commissioned officers of the provisional troop, which is well written but too long for publication.

It is unfortunate that nothing can be gleaned from these several reports as to nature of the drill itself and therefore we are unable to discuss the same. It is hoped that a report may be received from Captain Parker giving the Provisional Drill in full for publication in the forthcoming number of the CAVALRY JOURNAL.

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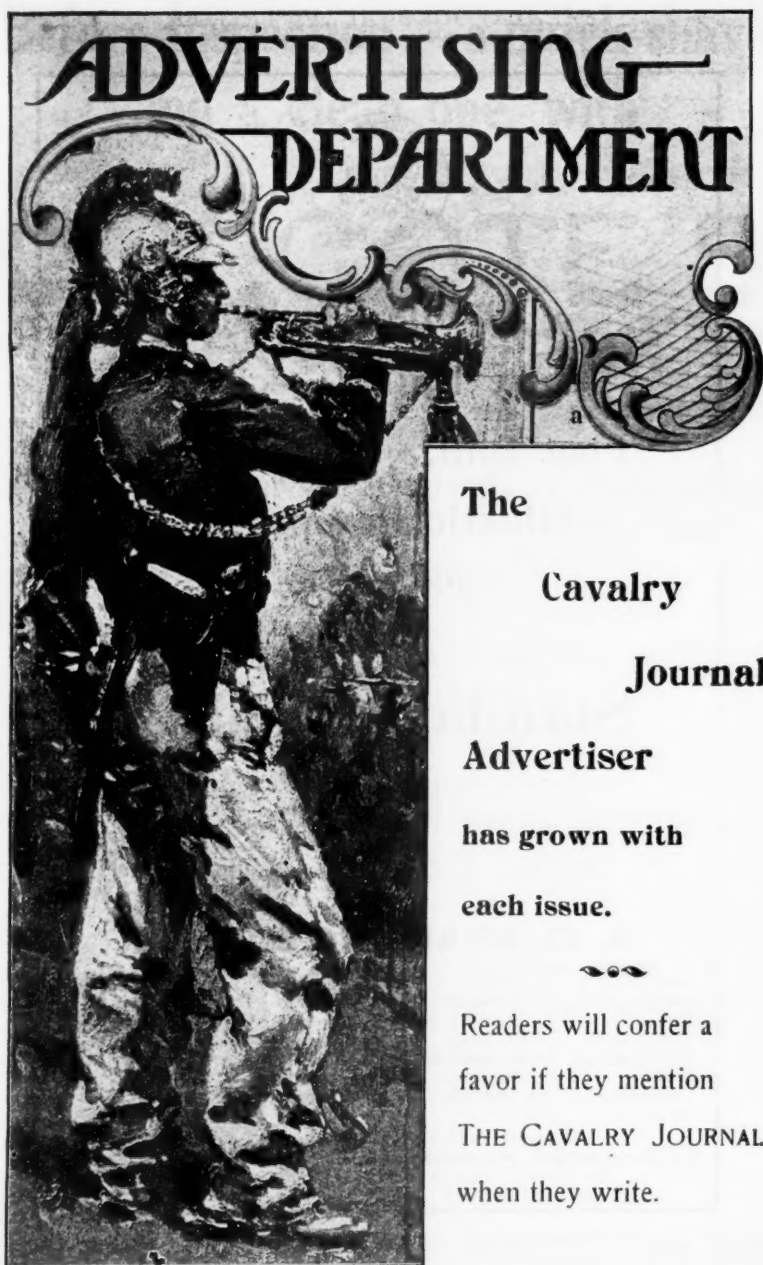
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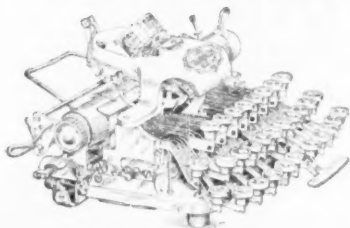
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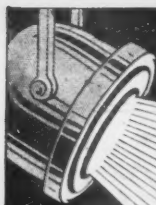
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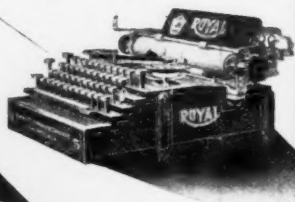
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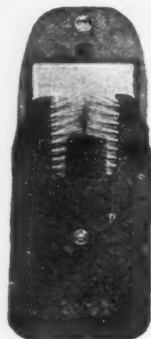


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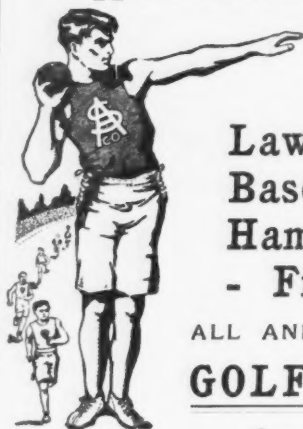
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